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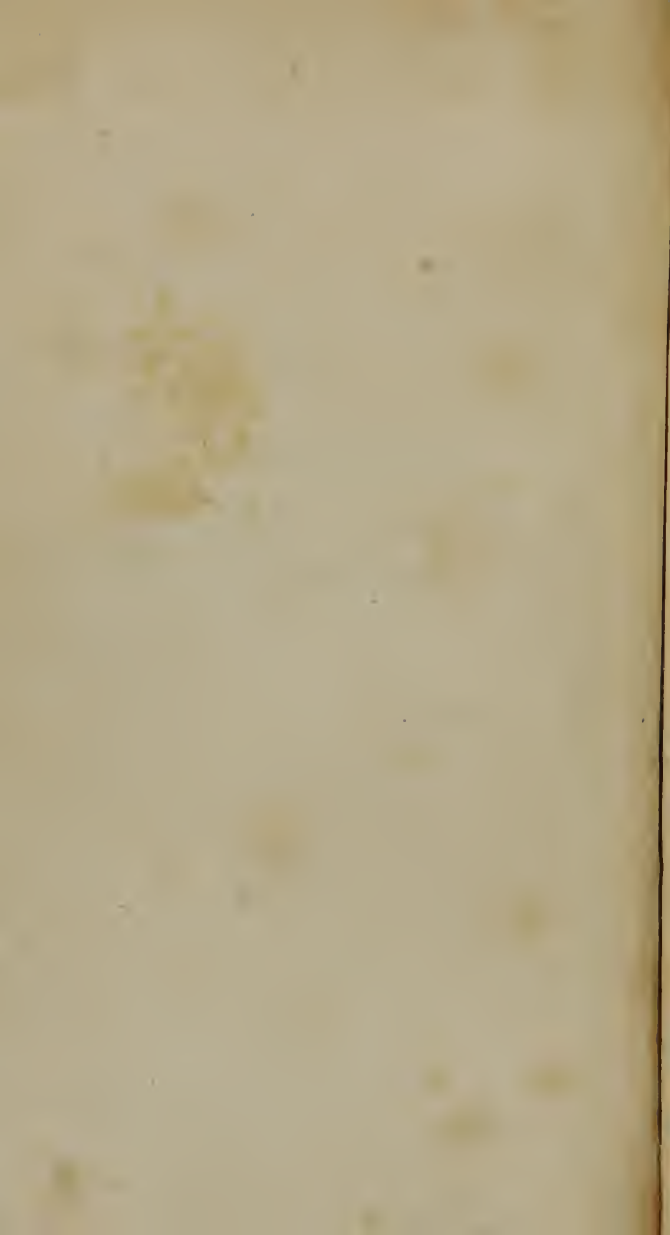
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May 1885

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A
POPULAR ESSAY
ON THE DISORDER FAMILIARLY TERMED
A COLD.



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A POPULAR ESSAY

ON THE DISORDER FAMILIARLY TERMED

A COLD:

IN WHICH

The Means of obviating the various Causes are explained
in a Manner familiar to the meanest capacity;

WITH

A COLLECTION OF APPROVED RECEIPTS, AND OBSER-
VATIONS ON THE MOST POPULAR REMEDIES;

PRINCIPALLY DESIGNED

For the Use of Families.

BY E. L. WHITE, SURGEON, &c.

“ Les rhumes emportent plus de malades que la peste.”

Colds are more destructive than the plague.

TO WHICH ARE ADDED,

ANNOTATIONS,

EXPLANATORY AND PRACTICAL:

Exhibiting a New Theory on the Action of many of the
predisposing and exciting Causes of Catarrh, with ori-
ginal and approved Receipts for the Cure of that Dis-
order in the United States.

BY J. STUART, M. D., &c.

PHILADELPHIA,

PRINTED FOR BRADFORD & INSKEEP, N. G. DUFIEF,
AND ALSOP, BRANNAN, & ALSOP,

BY T. AND G. PALMER.

1808.

District of Pennsylvania, to wit: Be it remembered, that on the twenty-sixth day of January, in the thirty-second year of the independence of the United States of America, A. D. 1808, N. G. Dufief, of the said district, hath deposited in this office the title of a book, the right whereof he claims as proprietor, in the words following, to wit:

(L. S.) “A Popular Essay on the disorder familiarly termed a Cold: in which the means of obviating the various causes are explained in a manner familiar to the meanest capacity; with a collection of approved receipts, and observations on the most popular remedies; principally designed for the use of families. By E. L. WHITE, surgeon, &c.

“Les rhumes emportent plus de malades que la peste.”
Colds are more destructive than the plague.

To which are added, Annotations, explanatory and practical: exhibiting a new theory on the action of many of the predisposing and exciting causes of catarrh, with original and approved receipts for the cure of that disorder in the United States. By J. STUART, M. D., &c.”

In conformity to the act of the congress of the United States, intituled, “An act for the encouragement of learning, by securing the copies of maps, charts, and books to the authors and proprietors of such copies, during the times therein mentioned;” and also to the act entitled “An act supplementary to an act, intituled, ‘An act for the encouragement of learning, by securing the copies of maps, charts, and books to the authors and proprietors of such copies. during the times therein mentioned,’ and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints.”

D. CALDWELL,
Clerk of the District of Pennsylvania.

DEDICATORY ADDRESS.

TO

THE LEGISLATURE

OF

THE STATE OF PENNSYLVANIA.

GENTLEMEN,

ALTHOUGH patronage could be solicited of none with better prospects of success, than of those who have acquired the highest confidence and esteem, in the hearts of their fellow-citizens, and eminently distinguished themselves in the encouragement of every art and science either useful to

a

man or profitable to society, yet have not personal considerations had the least share in the motives prompting to the liberty of addressing these pages to your notice.

In the mitigation of the criminal code of this state, you have found the means to prove that man may become useful to his connections and profitable to society, even after he shall have forfeited their protection, in the atrocity of his crimes. With a virtuous concern for morals, a laudable jealousy for the liberties of the citizen, and an anxious solicitude for the encouragement of industry, you have held forth an ex-

ample in legislation not only to be emulated by our sister states, but worthy the imitation of every civilized nation under the heavens. Yet, permit me to say, that, whilst **EMPIRICISM** is suffered to roam with impunity in this state, a most important part of your duty as legislators still remains to be performed.

This is productive of real evils, and evils of the greatest magnitude; it is to this state, what the fabulous monster of Lerna is said to have been to those of ancient Greece :

Not Hydra stronger, when dismember'd, rose
Against Aclmæna's much-enduring son,

Grieving to find, from his repeated blows,
 'The foe redoubled, and his toil begun ;
 Nor Colchis teem'd, nor Echionian Thebes
 A feller monster from their bursting glebes*.

I would not, however, be supposed to solicit, by this address, that which has been withheld from the combined interests of the faculty†. Such a solicitation might justly merit the imputation of presumption. But, firmly persuaded, you need only to be made

* Non Hydra secto corpore firmior
 Vinci dolentem crevit in Herculem,
 Monstrumvè submisere Colchi
 Majus, Echioniævè Thebæ.

Hor. Carm. lib. 4. ode 4.

† Vide the petition of the faculty to the last session of the legislature, and its fate.

acquainted with an abuse as an inducement to apply an appropriate remedy, I presume no farther than to call to your notice a few of the evils arising from EMPIRICISM, and then to leave to your own consideration and reflection, whether or not they may be sufficiently important to demand your attention.

Is education of any importance to government, the legislature of this state are certainly the guardians of it. You, gentlemen, are the legitimate guardians of THIS UNIVERSITY, the medical department of which, under the auspices of the present professors;

is already the envy, and promises, ere long, to become the rival of the most celebrated seminaries in the world. But what protection, or what encouragement does it receive at your hands, if, by an omission in legislation, those educated therein shall be degraded to hold the same rank, in the public estimation, with the most illiterate and mercenary impostor! What inducement is held forth to the wishes of the tender parent, or the guardian ambitious for the future welfare of his son or ward, to see him possessed of a liberal education in the science of medicine, whilst he is daily a witness to the toleration and caresses of the most unprincipled and

ignorant pretenders; to the degradation of the profession, and, in many instances, even to the supplanting of those who have been formed by every advantage to be derived from the instruction of the best preceptors and the accumulated knowledge of ages; who have studied for years with unremitting labour; who have sacrificed health, and even expended fortunes, to qualify themselves for the practice of a profession, which, in the estimation of all, except in that of the laws of this state, is deemed the most LIBERAL, and to which the empiric can have no farther pretensions than those of an unprincipled character, callous

feelings, a mercenary heart, and an unblushing effrontery.

It is not the UNIVERSITY, it is not the FACULTY of this state who are the only sufferers; the interests and the welfare of the COMMUNITY AT LARGE are equally concerned in arresting the desolating progress of EMPIRICISM. Under our present laws, the most ignorant and contemptible wretch in existence, whom indolence, or a want of knowledge in his trade or profession, shall have rendered inadequate to gaining a pittance in another state, hurries to this; and, *by assuming a title, advertising his infalli-*

ble nostrums, or by subscribing to half a dozen publications, and there affixing the initial letters of DOCTOR OF MEDICINE to his name, immediately becomes a man of consequence, and finds no more difficulty in preying upon the health and lives of your constituents, than remorse in preying upon their fortunes.*

Our author informs us, his particular situation had supplied him with numerous opportunities of witnessing the destructive progress of these traders in science†. It is much

* M. D.

† Vide page 196 of this work.

regretted, that similar opportunities should have exhibited to the editor so many instances of unconscionable extortion, so many objects of decrepitude and lingering disease, and, I may confidently add, so many cases of UNTIMELY DEATH from the same cause in this, otherwise, one of the best regulated cities in the universe.

The subordinate and labouring classes of the community are those peculiarly subject to the impositions and knavery of these pretenders. Deprived, for the most part, by the nature of their useful occupations, from acquiring sufficient information

for the direction of their choice of medical assistance, they easily become a prey to the vain boastings and empty promises of every impostor, who has the effrontery to commend his PATENT POISONS*, or to publish his own INFALLIBILITY. But what is the issue? Not suspecting the guile which lies concealed under a specious cloak of humanity, by the use of a few inert simples, or that of some more powerful drugs, given at a dangerous ran-

* Almost every thing that has been said of empiricism is equally applicable to the vending of patent medicines, and, consequently, the latter should be held in equal detestation with the former.

dom, without the least knowledge or regard to the state of the system, the patient is amused and flattered with prospects of certain recovery, until the golden opportunity of obtaining relief is past to return no more. Finally, plunged into despair, exhausted by poverty, and a victim to a disease eminently curable in the beginning, or to the improper treatment of a pander of Iniquity, he falls into the arms of Death, his deliverer, leaving the disconsolate partner of his former happy days widowed and helpless, with a numerous family of children to provide for; but who, alas! from a

merciless demand of exorbitant fees, is soon to be reduced to starvation, or to the only and mortifying alternative of becoming a charge to the community.

May not these unprotected unfortunates exclaim, in the emphatic language of scripture, “ we have asked for bread and ye have given us a stone !” Instead of a sympathizing friend, whose office it were to

——minister to *the* mind diseased ;
 Pluck from the memory a rooted sorrow,
 And, with some sweet oblivious antidote,
 Cleanse the stuff’d bosom of that perilous stuff
 Which weighs upon the heart,

ye have given us the most cruel and remorseless enemy ; instead of a benefactor and the charitable physician, ye have sent us a robber and an unprincipled assassin.

Long as I have intruded, gentlemen, upon your time and patience, these observations present you only with a few outlines of the evil under consideration. But, however unfinished the portrait, it is certainly a faithful one, and that it may prove a likeness sufficiently striking to render the prototype of too short duration to require a completion of the picture, is

somewhat the expectation, and most
assuredly the sincere wish of

Your most respectful

And very humble servant,

J. STUART.

Philadelphia, Feb. 4th,

1808.

PREFACE.

THERE is no work which less requires the aid of a preface than one, the object of which, evidently, is public utility, and the general welfare of mankind. The author of the present essay, however, is unwilling to let it pass through his hands without offering a few words in explanation of the motives which induced him to employ his pen on a subject which constitutes a part of each of the numerous sys-

tems of domestic medicine already in the possession of the non-medical world.

The number of popular works of this description has lately, it is true, been much increased by the addition of several valuable publications; yet the author ventures to assert, that there is none in which the complaint which forms the subject of the following pages is satisfactorily treated of. In a work, indeed, the object of which is to present, within the compass of a volume, a general outline of the healing art, it is impossible that each individual disease can be given at any

length, and with a due degree of perspicuity; more particularly those which are commonly regarded as least important.

Scarcely is there an individual in the British dominions, who has not an interest in the disorder commonly termed "*a cold*;" in the language of nosologists, *catarrh*. Almost every one is occasionally affected with it; to thousands it has proved the bane of health: and it is melancholy to reflect, but, at the same time, it is indisputably true, that this complaint is daily gaining ground, both by the increas-

ing frequency of its occurrence, and by its being oftener followed by calamitous consequences. Errors in the conduct of individuals, sometimes the effect of ignorance, more generally, however, of folly, usually give rise to its production, and the common domestic mode of treatment, influenced by mistaken notions of its origin, tends to render it inveterate. *A simple cold* is the common fore-runner of the most dreadful diseases incident to human nature, and its importance cannot be too strongly impressed upon the minds of those who are ignorant of medicine.

The object of the author, therefore, has been, to afford to the unprofessional reader a general yet clear view of the nature of this insidious complaint ; to point out to him the various causes by which it is liable to be induced ; and to put him in possession of rational principles, by which his conduct may be directed with a view to its prevention and removal.

The work, if accidentally perused by medical men, will be found to have only few pretensions to originality ; to the class of readers, however, for the eye of whom it is designed, it will not be the less useful.

The author has only to observe, that the treatment he has ventured to recommend (though in some respects novel) has had the sanction of much experience. The observations on some of the most popular remedies, it is hoped, will not be found an unacceptable addition.

CONTENTS.

	<i>page</i>
PRELIMINARY OBSERVATIONS, comprising the history of the disease and its various consequences, and the division of the work	1
SECTION I.	
PREDISPOSING CAUSES -	25
1st. Original peculiarity of constitution	ibid.
2d. An acquired irritability of the pulmonary system - -	33
3d. A morbid delicacy of frame, induced either by enervating indulgence, or by debilitating occupations -	38
SECTION II.	
EXCITING CAUSES -	41
1st. Alternations of temperature in the atmosphere - -	ibid.

2d. The application of CHEMICAL or MECHANICAL STIMULI to the mucous membrane which lines the air passages	103
3d. The application of MOISTURE to the whole or part of the body	115
4th. Certain INTEMPERARIES of the atmosphere, independent of its sensible qualities	117
TEMPERATURE, DIET, AND MEDICINE	133
I. Temperature	ibid.
II. Diet	139
III. Medicine	141
Laxatives	146
External use of cold air	150
Cold applied internally to the stomach	151
Nauseating doses of emetic tartar	153
Digitalis	157
Hemlock and ether inhaled	159
Acetum scillæ and gum ammoniac	ibid.
Demulcents and opiates	161
Sternutatories	168
Sialagogues	169
Pellitory of Spain	ibid.
Nitre	170
Detergent gargles	171
REMARKS ON SOME OF THE MOST POPULAR REMEDIES	175

XXV

I. Inhaling vapour of hot water		175
II. Steaming the head	-	179
III. Pedeluvium	-	180
IV. Inspiration of artificial air		181
V. Opium and paregoric elixir	-	182
VI. Emetics	- -	184
VII. James' powder	- -	186
VIII. Patent medicines	-	189
Perrin's balsam of lung-wort	-	ibid.
Allen's balsam of liquorice	-	ibid.
Balsam of honey	- -	190
Godbould's vegetable balsam		ibid.
Lucas' pure drops of life	-	191
Madden's vegetable essence		ibid.
Solomon's cordial balm of Gilead		ibid.
Balsam of horehound	-	192
Essence of ditto	- -	193
Essence of coltsfoot	-	ibid.
Balsam of Tolu	- -	ibid.
IX. Pectoral lozenges	-	201
Directions to make them	-	ibid.
X. Indigenous simples	-	204
Mallow, horehound, and coltsfoot		205

EDITOR'S NOTES.

1. Extensive dominion of catarrh	209
2. Loss of appetite - -	ibid.
3. Air of manufactories ameliorated	210
4. Irregularity of animal heat accounted for	ibid.
5. Increased action accounted for	211
6. Action of heat - -	ibid.
7. Action of cold - -	212
8. Unity of disease - -	ibid.
9. Comparative scale of the relative strength of the lungs and the skin -	213
10. Caution - -	ibid.
11. Drinking cold water -	214
12. Hysteria and atonic gout	215
13. Of flannels worn next the skin	ibid.
14. Absorption of perspiration -	218
15, 16. Of flannels worn next the skin	219
17. Precaution - -	220
18. Of the decomposition of water by animals	221
19. Of the action of oxygen: a new theory	222
20. Catarrh (or cold) by change of atmosphere	227
21. Action of musk and of the fumes of the muriatic acid accounted for -	229
22. Of moisture - -	230

23. Decomposition of sea-salt: a new theory	231
24. The operation of cold	233
25. Rationalia of the two plans of treatment	234
26. Theory of external cold	236
27. The effects of cold explained	237
28. Of blood-letting in colds	238
29. Of the use of calomel	239
30. Of the nauseating plan	ibid.
31. Of cold drinks	240
32. Of full vomiting	241
33. Nauseating plan repudiated	242
34. Digitalis and the nitric lac	243
35. Rationalia of the application of blisters to the back	244
36. Of blood-letting	245
37. Of Seneka snake-root	246
38. Of pedeluvium	247
39. Of opiates	ibid.

AN
ESSAY, &c.

OF all the diseases incident to the inhabitants of this variable climate, there is none so frequent in its occurrence,—none which excites so little attention,—and none, perhaps, which, when neglected, is so often followed by fatal consequences, as that commonly known under the name of *cold*, or *cough*. Its familiarity, and the deceptive mildness of its symptoms, usually render it so little regarded by the patient, that

he is seldom willing to sacrifice the various concerns of business or pleasure, for the sake of an indisposition which he considers so trivial; and, too surely, to this disregard may be ascribed the origin of the majority of the numerous train of diseases to which we are subject. It is the rock upon which the health and lives of thousands have been wrecked.

How common is it, in reply to the inquiries of health, to hear persons say,—*they have only a cold; it will soon go off; they are very subject to cold; but they never feel ill effects from it; it always goes off as it comes, &c.!* and yet, if to these very people, who thus carelessly commit the preservation of their health to chance, you urge the impropriety and danger of their inat-

tention, they will readily acknowledge to you, that "no complaint is worse than a cold." And, perhaps, in confirmation of the truth of this observation, will even relate to you some fatal instance of its truth, that may have recently occurred within the immediate circle of their acquaintance: for, unhappily, the melancholy consequences of this disorder are, in our island at least, too frequently the subject of observation, to admit of ignorance being pleaded as an excuse for neglecting the means that are necessary for its prevention and removal (1)*.

Thus it is, that hundreds daily run into danger with their eyes open, and ultimately fall sacrifices to their imprudence.

* The figures within parentheses refer to the notes by the editor, which are to be found at the end of the volume.

If we look for the origin of this neglect, and of the distress to which it subjects the human frame, we shall find it to proceed, principally, from two sources:—one of these is a too blind reliance on the curative power of what is commonly understood by the term *Nature*.

There is implanted in the animal frame a certain tutelary or preserving power, which, as it were, presides over its economy, repels the attacks of injury, and guards it from the dangers with which it is incessantly surrounded. The operation of this principle is powerful and well marked; but its precise nature has hitherto, and probably ever will, remain concealed behind the veil that screens, from human eye, the mysteries of the creation. It has excited

the attention of philosophers from the earliest ages, and they have applied to it various names, expressive of the extent of its agency*. The unlettered, also, have no less observed its effects ; and, accustomed to ascribe effects to causes only which are familiar, and within their own observation, they either imagine it to be the immediate interference of a superior power ; or, supposing it a part of that extensive principle which preserves the harmony of the whole creation, they call it *Nature*, and too often superstitiously leave to its influence the cure of complaints, where the judicious hand of art alone is adequate to their removal.

* *Αρχη; αυτοκρατεία; vis naturæ medicatrix.*

But, by far, its most frequent cause is indolence, on the one hand, or, on the other, inattention produced by the constant routine of the busy occupations of life : or, as it is commonly expressed by the sufferer himself, *want of time to attend to one's own feelings*. How many thousands are there, who, deeply immersed in dissipation, or wholly occupied in the acquirement of wealth, daily feel themselves unwell, and pained by their exertions ; yet, day after day, neglect the means of assistance until the mischief spreads, and, in the end, becomes irremediable !

It is the persuasion that much may be done towards preventing many of these dreadful ills, by a timely attention to this, their fertile source, that has induced me to

offer to the world the following pages ; in which it is my intention, after having pointed out the danger of depending too much upon the fatal expectation of *cold going off spontaneously*, to make the means of obviating the various causes which give rise to this destructive complaint more generally known and better understood, by society at large ; and, as its treatment almost exclusively falls within the province of domestic medicine, to lay down rules, familiar to every capacity, for preventing its fatal effects. And it is my ardent hope that these endeavours will not wholly fail in the promotion of that most desirable of all objects, the preservation of health ; without which “ wealth, honours, and every other consideration, is insipid and even irksome.”

I would not be understood to imply, that *cold*, or *catarrh*, is uniformly attended with danger. On the contrary, experience has convinced every one, that in the generality of instances, considering how frequently it occurs, it is perfectly innocent, and usually terminates in the course of a few days, either by an increased expectoration, or a spontaneous perspiration. It is only when aggravated, or rendered extremely frequent in its return, by neglect or imprudence, that it swells into importance, and, in the end, becomes a malady sufficiently formidable to combat and defeat the skill of the most experienced physician.

There are two periods of life at which the bad effects of *catarrh* are most to be apprehended : these are, *first*, the advanced state

of youth, or the term comprehended between the fifteenth and twenty-sixth year; *secondly*, the decline of life: and a long list of dreadful maladies might be enumerated, to which it occasionally gives rise. I wish, however, to confine the attention of the reader to three or four, which are its most frequent consequences: namely, in the young, *pulmonary consumption*, and *pneumonia*, or *inflammation of the lungs*; in the advanced in years, *habitual cough*, and *defluctions from the lungs*; or that disease called *chronic catarrh*, or *pituitous asthma*.

I believe I speak within compass, when I affirm, that at least eight out of every twelve cases of consumption, occurring in this country, have their foundations

laid in neglected cold*. The original seeds of the disease, it is true, have been previously sown in the constitution; but without being called into life and action by this exciting cause, they would, it is more than probable, in the generality of instances, have for ever lain dormant.

A person, whose pulmonary system is more than usually irritable, becomes the subject of a severe cold. He has often before been similarly affected; and, expecting it to go off spontaneously, as usual, pur-

* Numerous authorities might be adduced in support of this assertion, the truth of which, indeed, is universally admitted. I will content myself with referring the reader to the observations of Dr. Haygarth, vol. lxiv and lxv of the Philosophical Transactions; and of Dr. Willan, in his Reports of the

sues his various avocations, and takes no precautions for its removal; and his expectations soon appear about to be realized; the violence of the cough, and all the unpleasant concomitant symptoms subside, and nothing but a slight tickling, at the upper part of the throat, occasionally giving rise to a gentle concussion of the thorax, hardly amounting to a cough, remains, and of which he is himself scarcely sensible, although striking, by its peculiarity, to the observation of others. Light, however, as are his feelings, the mischief is now generally irreparable; and the unfortunate sufferer is marked a victim to the disease,

Diseases of London. *Vide p.* 86.—What is said of Chester and London may, with little limitation, be applied to other places.

before he is even conscious of the approach of danger. The uneasy sensation at the *larynx* becomes more teasing, and at length excites a short intermitting cough, of a peculiarly hollow, hoarse sound*. This

* Much has been said on the means by which a cough, truly phthisical, may be distinguished from that which accompanies catarrh, when it is long protracted; or, in other words, decide the time at which the disease is *catarrh*, and in which actual *consumption*. Some have thought that they can readily distinguish a consumptive cough from a catarrhal, merely by the sound, which is peculiarly hoarse and hollow. Its being usually accompanied with vomiting is considered, by Morton, as a striking and diagnostic mark; and Burserius insists upon the matter expectorated by early phthisical cough being characteristic in its appearance, and consisting of a fluid resembling water in which soap has been dissolved. These, however, are not uniformly present, and, though often well marked,

is generally, at first, falsely ascribed to some fresh attack of cold. It soon, however, be-

are liable to deceive ; the only sure criterion being the expectoration becoming purulent, while the fever assumes the *hectic* form, characterized by being that of a *quotidian remittent* ; the chief exacerbation of which commences about five o'clock in the afternoon, goes on increasing till after midnight, is attended with a circumscribed flush upon the cheek, excessive thirst, and a sense of burning heat in the palms of the hands and soles of the feet, and terminates, as morning advances, with a profuse sweat.

Dr. Heberden observes, that most coughs naturally tend to pulmonary phthisis ; but as there have been many examples of coughs, apparently consumptive, remaining in a tolerable state for twenty years, and which, with proper care, might remain so to the end of life, it is impossible to prognosticate the event, however strong the tendency may be, without being able to predict also what will be the patient's manner of

comes an inseparable companion, and in the end is excited by every thing which tends to hurry or impede the breathing. It is generally worst in the evening, during the night, or in a horizontal posture, and upon awakening from a sleep of some continuance; it is, however, as yet, unattended with fever; or the febrile symptoms are so slight as hardly to be perceived. It is either quite dry, or accompanied with an expectoration of a small quantity of a thin frothy matter, which differs from that of true catarrh, in being easily diffusible in other fluids. Sooner or later, the general health becomes impaired, the appetite is lost, the nights are restless, and a living, and whether he will always escape fresh colds, &c., &c. *Vide Heberden. Comment. de Morb. Hist. et Curat. c. 92.*

total disinclination takes place to every kind of bodily exertion.

“ The vigour sinks, the habit melts away ;
The cheerful, pure, and animated bloom
Dies from the face, with squalid atrophy
Devoured.”

At length the fatal *hectic* makes its appearance ; the expectoration becomes *purulent*, and a supervening train of horrid symptoms too clearly point out the inevitable approach of death, to every one but the miserable victim himself* ; who,

* Strange as it may appear, amidst all the horrors of this situation, the patient's hopes seldom abandon him, and generally even increase, as the fatal termination advances. This illusion is not confined to those who are ignorant of medicine ; “ I have seen,” says Dessanet, “ physicians just expiring with this com-

under the influence of a happy illusion, is amused by hope, and confident of recovery, amidst a dreadful complication of distress ; and often dies while projecting schemes of future interest or amusement*.

plaint, who would not admit that they were consumptive.” A late eminent teacher of anatomy, in his very last lecture (at a time when the symptoms of confirmed decline were too obvious to be mistaken by the youngest of his pupils), speaking of this circumstance whilst describing the structure of the lungs, observed : “ This deceitful persuasion is not to be wondered at in those who have not studied physic ; but that any man to whom frequent observations must have made every fatal symptom so familiar, can be blind to his own situation, is truly wonderful.” He himself died of phthisis within the fortnight.

* There are certain classes of people who appear to be exempted from the ill consequences of catarrh, as far as relates to its termination in consumption.

The other disease which I have mentioned, as occurring more particularly in the early periods of life, in consequence of aggravated cold, is an inflammation of the lungs, produced by an extension of the inflammatory affection of the trachea and bronchiæ. When this occurs, the person, after having for some time been the subject of cough, attended with oppression and sense of weight referred to the chest, with more or less difficulty of breathing,

That *butchers* and *fishwives* are hardly ever known to die consumptive, is an established fact. The same has been observed of *catgut-makers*, *sailors* and *watermen*, *stable-boys*, *grooms*, and, in a less degree, *gardeners*, and certain *small farmers* who assist in cultivating their own lands. All these, however, are liable to colds as other people. *Vide Beddoes. Early Signs, &c., of Consumption.*

is suddenly seized with a severe pain in a particular part of the chest ; his respiration becomes extremely laborious and painful, and an acute fever, attended with the most urgent symptoms, supervenes : a state always attended with the utmost danger.

People advanced beyond the middle age are extremely subject to a complaint, which, when once established, almost invariably becomes their inseparable tormentor for the remainder of life. It is characterized by the following combination of symptoms : a habitual cough, coming on, for the most part, in the form of paroxysms or fits, often extremely violent, and occasionally accompanied with severe pains in the head ; a copious and almost

Continual expectoration of a white, viscid, frothy matter ; oppression at the chest, and a wheezing, laborious respiration. These symptoms, during the spring and summer months, are usually considerably alleviated ; but every succeeding winter brings them on with redoubled severity, until the constitution becomes broken : the patient is agitated and fatigued ; he is deprived of rest ; a lurking fever preys upon his vitals ; his lungs are shaken, and their action impaired ; digestion, and all the other functions essential to life, are impeded ; and at length he is relieved, by friendly Death, from a state of the most miserable existence. Ask the majority of these sufferers, to what they ascribe the origin of their maladies, and they will uniformly tell you, *neglected cold*.

The sensations of what is commonly called *having a cold* are, in this climate, so universally well known as hardly to need description. There are very few but must, more or less frequently, have experienced some or all of the following symptoms: lassitude or weariness; a sense of chilliness alternating with glows of heat upon the skin, referred more particularly to the face and chest; stuffing of the nose; more or less obtuse pain of the head; frequent sneezing; a disagreeable dryness and huskiness in the nostrils, followed by the distillation of a thin acrid fluid from these, and from the eyes, which are red and sore; and cough, together with hoarseness, soreness of the trachea, some difficulty of breathing, loss of appetite, sense of general

indisposition, and a slight degree of fever (2).

These have their origin in an inflammatory affection of the delicate mucous membrane which lines the passage through which the air passes in respiration; and they vary as the part more immediately affected happens to be the *nostrils*, the *throat*, or the *chest*.

When the disorder chiefly occupies the nostrils and contiguous *cavities*, the cough and disposition to fever are only slight; the prominent symptoms being a dull pain, or sense of uncommon weight in the forehead, redness and turgescence of the eyes, and a distressing fulness and heat in the nostrils. These are soon followed by a

copious excretion of mucous fluid from the parts, which most commonly proves a solution of the complaint. This is what is commonly understood by the term a *cold in the head*, and is the most simple form of the complaint. Sometimes the inflammation is nearly confined to the throat (*trachea, larynx, and adjacent parts*); in this case the affection of the head is inconsiderable, but the cough is more severe, and commonly attended with more or less sore throat. Frequently, however, it extends to the ramifications of the air-tube, and occupies the greater part of the internal surface of the bronchial system; when the breathing becomes laborious and wheezing, the fever is often considerable, and the disorder assumes its most severe form.

Having made these preliminary observations, I shall now enumerate the various causes by which colds are liable to be produced, and afterwards proceed to speak of the best mode of treating them.

The causes of disease are usually divided into, first, *predisposing*, or those which render the body susceptible of its attacks; and, secondly, *exciting*, or those which, when applied to the body, under a state of predisposition, excite disease into action.

The *predisposing* causes of *catarrh* are, 1st, original peculiarity of constitution; 2dly, an acquired morbid irritability of the pulmonary system; 3dly, a morbid delicacy of frame, induced by enervating indulgences, or weakening occupations;

or occasional and accidental debility. Its *exciting* causes are, 1st, alternations of temperature; 2dly, the application of chemical or mechanical stimuli to the mucous membrane of the air passages; 3dly, moisture applied, in a certain way, to the surface of the body; 4thly, occult intemperies of the atmosphere. These it will be necessary to consider separately.

I.—PREDISPOSING CAUSES.

1st.—*Original peculiarity of constitution.*

Although every one is, more or less, liable to be affected with catarrh, yet there are some whose constitutions render them more particularly obnoxious to its attacks.

Owing to a peculiarity of organization, or of the physical condition and composition of the human frame, the constitutions of different individuals are hardly less various than their external form and structure, and give to each a predisposition to certain diseases in preference to others. These varieties have been classed, by phy-

siologists, under four heads, from an ancient and erroneous theory, called *temperaments*, namely, the *sanguineous*, the *phlegmatic*, the *choleric*, and the *melancholic*.

It is in the first of these constitutions that the propensity to what, in common language, is termed *taking cold* is most observable. The sanguineous temperament is characterized by the following marks : a fair, rosy complexion ; light hair and eyes ; a smooth, soft skin, through which the large blue veins are usually remarkably conspicuous, often assuming a mottled appearance, in consequence of its transparency, which allows of the vessels being seen beneath ; remarkable sensibility, irritability of frame ; and, with regard to the mind, gaiety, volatility, and, generally,

uncommon versatility : ideas and impressions changing in rapid and capricious succession. The most remarkable instance of extreme susceptibility of catarrh, that has ever come under my own observation, occurred in a young lady, in whom the constitution above described was exquisitely marked. So excessively irritable was her nervous system, as even to render her existence miserable : the slightest sudden and unexpected impression upon the mind or senses being sufficient to produce an agitation of frame, under which the pulse would increase in frequency often to 110 beats in the minute, and the whole surface of the body would become suffused in one continuous blush. Every inconsiderable alternation in the temperature occasioned her to become the subject of catarrh. I once

had occasion to attend her for some local affection, which required the application of cloths, wetted with vinegar and water ; the consequence of their use was a very severe cough, attended with urgent symptoms of pulmonary disorder. Upon my expressing some surprise at this extraordinary susceptibility, she assured me, that, in the winter months, she seldom plunged her hands into cold water, after having been heated by a warm room, without experiencing a considerable rigour, with a sense of oppression at the chest, which, upon again coming near the fire, was uniformly followed by sneezing and tickling at the larynx. A frequent repetition of catarrh at length brought into action a tubercular affection of the lungs, which terminated her existence by a rapid decline, at the age of twenty-two.

In these constitutions, the bad effects of colds are more especially to be dreaded, if there exist, at the same time, that faulty conformation of the thorax termed a *narrow chest*. This peculiarity is occasioned by the breast-bone being pressed too much in upon the lungs; and the shoulder blades, in consequence, thrust out from their proper position, and made to assume, in some measure, the form of wings: hence the chest appears flattened or depressed in front, whilst its sides are unnaturally protruded. When this mal-conformation exists in any considerable degree, the neck usually is, or at least appears to be, unnaturally long and slender.

Combined also with the sanguineous temperament, are often certain character-

istics which mark a disposition to the disease called struma or scrofula. These are, large eyes, an expanded pupil, swollen eyebrows, a peculiar softness of the hair, thick nose, tumid upper lip, a skin unnaturally soft and yielding to the feel, sound teeth, with a singular degree of whiteness and transparency*, a peculiarly clubbed appearance of the ends of the fingers, hollow temples, elevated cheek-bones, disposition either to incurvation or reflection of the nails. In these constitutions particularly, the complaint of which we are treating cannot be too justly dreaded, or too carefully guarded against; its frequent occurrence usually proving the exciting cause to that state of the lungs which terminates in the

* Vide Simmons on Consumption.

most deplorable disease incident to mankind, and by which thousands are yearly carried to an untimely grave ; namely, *scrofulous consumption*.

But however predisposed to disease the constitution may be, by carefully guarding against the causes which more immediately produce it, its dreaded incursions may usually be prevented, and health may often be preserved to old age. “ With what ease,” observes Dr. Fothergill*, “ would many of the most incurable consumptions have been prevented, or cured, at their first commencement ! A person, whose emaciated figure strikes you with horror, his forehead covered with drops of sweat, his cheeks

* See Medical Observations and Inquiries, vol. iv.

painted with livid crimson, his eyes sunk, all the little fat which raised them in their orbits, and every where else, being wasted, his pulse quick and tremulous; his nails bending over the ends of his fingers; the palms of his hands as dry as they are painfully hot to the touch; his breath offensive, quick, and laborious; his cough incessant, scarce allowing him time to tell you, that some months ago he *got a cold*; but, perhaps, he knew not how he got it; he neglected it for this very reason, and neglected every means of assistance, till the mischief was become incurable, and scarcely left a hope of palliation. You see multitudes of such objects daily, and see them with a mixture of anger and compassion for their neglect and their sufferings.”

2d. *An acquired morbid irritability of the pulmonary system.*

It may be regarded as an established law in the animal economy, that the irritability of a part shall be increased in proportion to the frequency of the repetition of the impressions of stimuli. This is very remarkably observable with regard to the pulmonary system. The liability of the bronchial membrane to be affected increases with every repetition of disease; one irritation paves the way for another; and every diseased action renders the parts more prone to a succeeding one, until, in time, the most trivial cause becomes sufficient to produce the morbid effect. Thus one *cold* may be justly said to be the predisposing cause of

another ; and thus it is, that catarrh operates in producing more formidable diseases. An excessive susceptibility is created, every fresh attack spreads the mischief wider, the more minute ramifications of the bronchiæ become affected, and at length either the substance of the lungs puts on that peculiar action which produces tubercles, and these, inflamed and matured by subsequent attacks, become a fatal phthisis ; or the membrane itself assumes that distressing state of chronic disease we have already spoken of under the name of *chronic catarrh*, or *pituitous asthma*.

The importance, therefore, of avoiding the exciting causes of a disease, so insidious in its nature, cannot be too strongly insisted upon, more particularly in the early periods

of life, and in constitutions peculiarly obnoxious to its attacks. “How often is the meridian and close of life obscured by clouds of misery, from inattention, or mismanagement, in the helpless period of infancy !”

There is a powerful cause, producing a permanent state of morbid irritability of the mucous membrane of the air passages, from which, however, the generality of individuals are exempt; it being, fortunately, peculiar to certain artificers. This is the frequent introduction of mechanical stimuli with the inspired air. The air, thus impregnated with extraneous matter, is incessantly irritating the parts through which it passes; in consequence of which they are perpetually the subject of catarrh, and often early die consumptive.

Of the artisans whose misfortune it is to be rendered thus peculiarly obnoxious to disease, the following are the principal: needle-pointers*, the dressers of flax and feathers, stone-cutters, millers†, bakers, bricklayers' labourers, laboratory men, coal

* In the *fifth* volume of *Memoirs of the Medical Society*, we are presented with a very interesting paper, by Dr. Johnston, in which he informs us, that persons employed in the pointing of needles, by *dry grinding* them, are quickly affected with cough, purulent, and, occasionally, bloody expectoration, and scarcely ever attain the age of forty years.

† *Millers* and *bakers*, although from the nature of their employment extremely liable to coughs and cold, are said seldom to die consumptive. The same has been observed of *japanners*, whose work is carried on in an atmosphere of resinous vapour.—*Beddoes on the Causes, &c., of Consumption.*

heavers, chimney-sweepers, hair-dressers, workmen in the warehouses of leather-sellers, workers in plaster of Paris and marble*, those employed in the spinning of silk, cotton, flax, hemp, &c.†, lace weavers, tailors‡.—Many persons, thus engaged, struggle with a constant, hard, troublesome cough, with oppression at the chest, until it terminates in a pulmonary disease, which proves fatal to them.

* The pulmonary affection incident to these artificers has, in France, where it is more frequently observed, obtained the name of the *maladie de grès*.

† Vide *Statistical Reports for Scotland*.

‡ *Scythe grinders* are said to be particularly disposed to catarrh and consumption.—*Simmons on Consumption*.

3d.—*A morbid delicacy of frame, induced either by enervating indulgences, or by debilitating occupations.*

I might here enumerate all the various errors of conduct and habit, which conduce to disease in general; for, however the body is debilitated, it becomes more prone to the reception of noxious impressions, and, in consequence, to the exciting causes of colds. But this is a task which has been already ably executed by Dr. Beddoes; to whom the world is so highly indebted for his valuable popular Essays on Health.

Those which are more especially liable to operate in producing a predisposition to catarrh, are, *a too sedentary mode of life,*

and the habituating the body to too high degrees of temperature ; concerning these, it is my intention to offer some serious observations in a subsequent part of the work, when I proceed to speak on the means of obviating the ill effects of alternations of temperature.

There is, unfortunately, however, a very considerable part of mankind, whose particular trades or occupations tend to the production of a weak and delicate habit of body, which renders them particularly obnoxious to the diseases arising from cold.

These are the individuals who, from the nature of their employments, are either compelled to breathe incessantly the impure air of large towns, and debarred from exer-

cise, or whose labours are carried on in close and heated rooms. All these are usually excessively susceptible of catarrh*.

The same disposition to the reception of catarrh ensues from any occasional and accidental exhaustion of the powers, either of the mind or body. The principal sources of this are, preceding disease, intemperance, fatigue, and inordinate excitement of the passions.

* A surgeon of London (Mr. Carlisle), whose opportunities of information are very extensive, relates of the gilders in this city, who work in heated rooms, that "six out of seven are said to die consumptive, in their apprenticeship." On this subject, vide Beddoes on Consumption (*Hygeia*, vol. 3), and Willan on the Diseases of London (3).

II.—EXCITING CAUSES.

1st.—*Alternations of temperature in the atmosphere.*

Catarrhs are considered almost endemial to Great Britain, and their great frequency may be very justly attributed to the peculiarity of our climate. Our atmosphere is, perhaps, more variable in point of temperature than that of any other country. “ We frequently find a warm summer’s day succeeded by one as cold and keen as those of February or March ; and, what is still worse, even in the same day, the former part is sometimes attended with soft breezes from the south-west, and a warm relaxing

atmosphere, loaded with vapour ; when, on the contrary, the afternoon shall be accompanied with a sharp, dry, biting north-east, affecting the body and lungs in the opposite extreme.” We can seldom look forward with confidence to a temperature peculiar to the season. The commencement of summer often assumes the severity of winter ; and the spring is generally ushered in by an unnatural and sickly warmth, which only tends to render the frame more sensible to the rigour of an approaching tempestuous equinox.

“ Scarce, in a show’rless day, the heavens indulge
Our melting clime, except the baleful east
Withers the tender spring, and surly checks
The fancy of the year. Our fathers talked
Of summers, balmy airs, and skies serene !
Good heaven ! for what unexpiated crimes

This dreadful change ! The brooding elements,
 Do they, your powerful ministers of wrath,
 Prepare some fierce, exterminating plague ?
 Or is it fix'd in the decrees above
 That lofty Albion melt into the main ?
 Indulgent Nature ! O dissolve this gloom !
 Bind, in eternal adamant, the winds
 That drown or wither ; give the genial west
 To breathe, and in its turn the north ;
 And may once more the circling seasons rule
 The year, nor mix in every monstrous day."

These severe changes in the weather
 are, it is true, the most unhappy circum-
 stances attending our situation, and cannot
 fail to have the most pernicious effects
 upon the human constitution ; but injurious
 as they are in themselves, their morbid
 operation is but too frequently aggravated
 by the improper conduct of individuals,

who, led away by *fashion*, fatally neglect the means which are necessary to guard against their influence.

In order to make intelligible to the reader the manner in which a cold is produced, by variations of temperature, it will be necessary to premise a concise view of the modern *theory of animal heat*, and of the mode in which *external temperature* acts upon the living animal frame.

The common heat of the human body, in health, is 98° of Farenheit's thermometer; and one of the most wonderful characteristics of vitality is the capacity of maintaining this degree under every variation of external temperature. This continual reproduction of animal heat is attributed, by

modern chemistry, to the decomposition of atmospheric air in the lungs, during respiration.

The aeriform fluid which every where invests the surface of the globe, and which is inspired by the animal kingdom, is a compound, consisting of several principles, the chief of which are *azot** and *oxygen*†,

* *Azot* (so termed because it is unfit for the support of life) is a simple elementary substance, not distinctly perceptible to the human senses, but the reality of its existence is known by its compositions. Combined with caloric, it forms what is termed by chemists azotic gas; and of this compound there exists always, in the atmosphere, a proportion equal to seventy two parts out of a hundred.

† *Oxygen* (which has received its name from its being the principle of acidity, or constituting the ba-

maintained in a gaseous form, by means of *caloric**, or the matter of heat. It is the

sis of all acids) is likewise a chemical element. It is one of the most general agents in the operations of nature, and exists, in combination, with almost every modification of matter. In union with caloric, it forms a subtle fluid, or gas, which exists in the atmosphere in the proportion of twenty-seven parts in a hundred, and is the only principle which conduces to the support of respiration and combustion.

* A word used to denote that substance by which the phenomena of heat are produced. Philosophers formerly differed in opinion respecting the causes of these phenomena. There were many who considered them as merely the effect of the mechanical changes of bodies, and some even admitted an active principle of cold. At present, however, it is unanimously agreed, that these effects were produced by a peculiar matter termed caloric. This is an impenetrable and highly elastic fluid, so very subtle that its gravity

latter of these only which promotes the respiration of animals. During this function, the oxygen gas is separated from its admixture with the azot, and is resolved into its constituent parts, when the *oxygen* combines with the blood, and gives it its vermilion colour; and the *caloric*, which is thus set at liberty, also enters into a fresh combination, and quickly diffuses itself throughout the animal body, producing in it that temperature termed animal heat*.

has not yet been ascertained. It is diffused through all natural bodies, with which it is more or less combined, according as their affinities for it are greater or less; and their temperature is high or low, in proportion as it is more or less abundant.

* The oxygen gas inspired combines with the venal blood returned to the lungs, partly with the whole, and partly with its *hydrogen* (a simple elemen-

This decomposition of oxygen gas, and consequent evolution of caloric, appears to be influenced, in great measure, by the agency of the nervous system. The faculty

tary substance, which combined with oxygen forms water) and *carbon* (pure charcoal, the general residue of decomposition), individually forming water and carbonic acid, which are expired; and the combination of the oxygen gas with the remainder of the black venal blood produces the red arterial blood, in which, during the circulation, the union of the oxygen with the carbon and hydrogen is gradually extended; and, at length, having attracted a new portion of hydrogen and carbon, and become black, it returns to the lungs through the veins. Hence the caloric, contained in the oxygen gas, is partly disengaged in the lungs, and partly liberated during the circulation of the blood, in consequence of the gradual combination of the oxygen with the superabundant hydrogen and carbon.

of evolving heat is in highest perfection when the animal is in perfect health, and the functions of the brain and nerves are in their full vigour ; in any deviation from this state, it becomes uncertain and irregular ; sometimes rising much higher than the natural standard, sometimes sinking far below it ; but almost invariably corresponding with the degree of nervous influence then operating in the system : if this be inordinately great, so will be the degree of animal heat ; and if it be depressed, the temperature of the body will be proportionately reduced*. This is remarkably

* There are many, no doubt, who will be inclined to doubt the justice of this observation. In the majority of disorders where nervous energy is depressed, as also in the *atonic* diseases of organs intimately connected with the brain, the reduction of temperature is

illustrated by the train of symptoms which are observed to take place in every well-sufficiently obvious; but it will be objected, perhaps, that there are some states of nervous debility, in which the temperature is, on the contrary, even increased above the natural standard. I have lately turned much of my attention to this subject, and am disposed to be of opinion that, in every case of this kind, there are other causes which operate in producing the effect. At a future time, unless indeed I should fortunately be superseded by some one more competent to the task, it is my intention to offer to the world the result of a great number of experiments, made for the purpose of ascertaining the variations in the temperature of the body under different states of disease. A physiological disquisition would be inconsistent with the plan of the present work; but if the generation of heat were, as is generally supposed, a process purely chemical, it must bear a strict proportion to respiration, and to the circulation of the blood. That it by no means does so, however, the

marked febrile paroxysm. Every circumstance occurring in the first stage, or that which is the immediate effect of the sedative power which produced the disease, is characteristic of nervous debility : listlessness, and a universal languor, pervade the frame ; and every sensation denotes a diminished energy of the brain. The heat,

following very remarkable case, related by Mr. Hunter (*Animal Economy*), will be sufficient to prove : A person affected with apoplexy, while covered up in bed, and defended from all external impressions, was observed to have very sudden and remarkable variations in the temperature of his body : in one instant its heat was found greatly increased above the natural degree ; in the succeeding, as much reduced below it, though the pulse continued natural. To what could these sudden transitions be ascribed, but to an irregular action of the brain, and consequent variable distribution of nervous influence (4) ?

from being natural, sinks two, three, or even four degrees below the standard*.

When the re-action of the system takes place, and the second or hot stage is established, sensation, intellect, and all the various functions of the brain and nerves, before torpid, become, on the contrary, inordinately acute, and the heat is found gradually to rise until it attains 100, 104, 105, and, in some cases, 107 degrees of Fahrenheit's thermometer†.

It is needless, I presume, to observe, that the terms made use of to express varieties of temperature are merely relative ; the limits

* Vide the Reports of Dr. Currie, of Liverpool.

† Vide cases related by Drs. Currie and Dimsdale.

between heat and cold constantly varying with the particular state of the body immediately previous to, and at the time it is subjected to the impression. In general, however, below 45 degrees is considered *cold*, above 70 *hot*, and the mean between the two *temperate*.

The operation of heat upon the living system is universally stimulant; the operation of *cold* is either tonic or sedative, according to the mode of its application; for the animal frame, like inanimate matter, is liable to have a portion of its heat abstracted from the external parts, by the application of a cooler medium; but its inherent powers of regeneration, when the impression of cold has been only moderate, and of short duration, quickly supply the

portion withdrawn, and the recent evolution of heat usually exceeds the previous abstraction; hence moderate degrees of cold, quickly applied, prove invigorating, by calling forth the action of the calorific powers (5); but, when it is either more intense, or applied for a longer time, it so impairs the energy of the brain and nerves, as to render them inadequate to the performance of their functions (6); in consequence of which the system becomes deprived of the due influence of that principle which before conduced to the support of its inherent heat, notwithstanding respiration continues to be performed as usual, and the usual quantity of air continues to be taken into the lungs. Its operation in this case is sedative, or debilitating. Thus, by the agency of a certain principle residing in the

nervous system is the natural heat of the body preserved and supported ; and, consequently, in proportion as the frame is more vigorous, so will be its capacity of resisting the effects of external temperature.

Whenever the whole, or part of the body, has been exposed to the long-continued action, or otherwise to the sedative influence of cold, it is said to be chilled ; or, in other words, it falls into a state of atony, in consequence of the reduction of its nervous energy, and is thereby deprived of the faculty of duly supporting its natural heat (7).

This state occurring universally, and to a great extent, usually proves destructive

to life*. When local, or general, and in a less degree, it proves the exciting cause to

* The way in which extreme cold produces death, is by inducing a profound and fatal sleep. Under very severe degrees of cold, therefore, the approach of drowsiness should be guarded against with the utmost care, and prevented by exertion. Often, however, the propensity to sleep is utterly unconquerable, and the person exposed to the cold is unable to resist its power, although conscious of the fate that must result from indulging it. Solander, who well knew this circumstance, and who had already cautioned those who accompanied him, whilst traversing a desert region covered with snow, was himself the victim of an overwhelming drowsiness, from which his companions in vain attempted to rouse him. The circumstance of a woman remarkably surviving a very long exposure to the influence of frost and snow, some winters since, in Huntingdonshire, must be in the memory of every one. She

various diseases of the active kind, determined in their seat by the particular predisposition of the person ; the weakest part of the body invariably receiving the noxious impression, however generally applied. Thus, those whose *pulmonary system* is weak and irritable, will have *catarrh* or *pneumonia* ; others, whose *muscular fibres* are most susceptible, will be attacked with *rheumatism* ; and those addicted to *ebriety* will, perhaps, be affected with an *inflammation of the liver* ; and so of various other inflammatory affections (8). Catarrhs (colds), however, are by far most frequent, which perhaps may be accounted for, in a great measure, from the lungs being so afterwards declared it was her firm belief, that the preservation of her life was the consequence of having accidentally read the above account of Solander.

particularly exposed to all the varieties of atmospherical temperature : but it is by no means necessary, in order to produce catarrh, or any other local inflammation, that the exciting cause be applied, either generally to the system at large, or exclusively to the part ; for the effect of cold, applied any where to the body, will, by sympathy, or that astonishing power of connexion in the living animal system, be communicated to, and be equally the cause of injury to, that part which happens to be more susceptible than the rest (9). Thus, the walking barefoot for an instant upon the cold floor, the accidentally exposing to the cold air any part of the body that has been usually covered, the taking in of cold fluids into the stomach, or any other partial impression of cold, however slight, will of-

ten be sufficient to produce an inflammation of the delicate membrane of the bronchee. Many, indeed, are so remarkably susceptible of this affection, that they are seldom conscious of the causes which excite it : variations of temperature, too slight to be sensible to the feeling, usually proving sufficient to produce a state of catarrhal disease.

The circumstances which, added to the presence of the predisposing causes before mentioned, facilitate the operation of cold in the production of catarrh, are, 1st, *with respect to the cold itself*, its being applied partially, or with a current of air, its being combined with moisture*, the vicissitude

* Vide what is said on this subject, under the head III.—*The application of moisture to the whole, or to a part, of the body.*

from heat to cold being sudden ; 2dly, *with respect to the person subjected to its influence*, his own powers of generating heat happening at the time to be defective, from the debility induced by long fasting, fatigue, profuse evacuations, recent debauch, watching, much study, and, consequently, sedentary life, rest immediately after violent exercise, sleep, preceding disease ; the whole or part of the body being deprived of its usual covering, or one part being exposed, while the rest are kept warmer than usual ; the presence of perspiration.

The precise mode in which cold produces inflammation has given rise to much dispute. To enter largely into this subject would be foreign to the design of the present work ; the following concise expla-

nation, from which the intricacies of theory are excluded, will be amply sufficient to afford a general idea. The part chilled by the impression of cold is not immediately capable of accommodating itself to a fresh supply of caloric*. This, therefore, which was before only a natural stimulus, if suddenly imparted, becomes a powerful irritant, and excites the vascular system of the part to inordinate action. Hence it will be understood that, in order to induce catarrhal inflammation, it is necessary that the sedative operation of cold should be followed, more or less immediately, by the stimulus of as high, or a higher degree of heat, than is

* In the language of modern physiology, under the influence of cold excitability accumulates, and the system becomes more capable of receiving the action of stimuli, and is morbidly affected by them.

natural to the part : this is communicated in various ways ; either by the natural caloric functions, subsequently excited into increased action by the powers of nature, in order to supply the place of the portion of heat previously abstracted ; or by an increased circulation in the arterial system, induced by violent muscular exertion ; or by the operation of stimuli taken internally*, or by external and artificial heat (10).

A person, not particularly liable to catarrh, would, probably, seldom feel ill effects from being chilled by an exposure to the cold air, if he were careful to restore

* The mistaken idea of the necessity of " taking something warm to keep the cold out," occasions more colds, perhaps, than all the other exciting causes of the complaint united.

the natural warmth of the body by degrees ; but if, during the presence of that uncomfortable state of feeling produced by the diminished temperature, he either suddenly come into a warm room, or drink of warm stimulating liquids, he will seldom escape with impunity. In those who are predisposed to it by a natural or acquired delicacy of habit, an artificial stimulus is unnecessary to produce the effect.

Cold, applied *internally*, very rarely becomes a cause of catarrh. Its impression upon the stomach, indeed, is seldom injurious, unless under two circumstances ; first, when combined with the influence of a very low degree of external temperature, or when received during the existence of a state of sensible cold ; secondly, during the presence of profuse perspiration. In

the former case, it co-operates in the production of chill; in the latter, it sometimes produces so great and immediate a depression of the *vis vitæ* as to be suddenly destructive to life*.

* Of the fatal effects of drinking cold water during profuse perspiration, the records of medicine afford innumerable instances. Of these none, perhaps, is more striking than the following: A young man, who had been engaged in a long and severe match at fives, after it was over sat down on the ground, panting for breath, and covered with profuse perspiration; “in this state he called to a servant to bring him a pitcher of cold water, just drawn from a pump in sight. He held it in his hand for some minutes, but put it to his head as soon as he had recovered his breath, and drank a large quantity at once. He laid his hand on his stomach, and bent forwards; his countenance became pale, his breath laborious, and in a few minutes he expired.” (11).

The means of obviating this most frequent cause of catarrh are easily to be deduced from what has just been said of the effects of temperature upon the human body. They consist, 1st, in gradually and cautiously inuring the habit to the impres-

Vide Currie's (of Liverpool) Reports of the Medical Properties of the External and Internal Use of Water in Febrile Diseases ; where various other analogous cases are related from different authors, p. 100, *et seq.* The introduction of cold fluids into the stomach is never injurious while the heat of the body is dry, however great it may be ; nor upon the first breaking out of sweat. In all the instances which are recorded of its fatal effects, the perspiration, on the one hand, has been extremely profuse and long continued, or, on the other, it has been accompanied by the debility of fatigue produced by previous inordinate exertion. *Vide Schenkius, Observationes, Medicæ Rariores Lugd. 644.*

sions of cold ; 2dly, in accommodating dress to season and personal feeling ; 3dly, when changes from cold to heat, or the contrary, are unavoidable, in guarding against the transition being sudden and immediate.

1. Throughout the great diversity of climates, from the burning sands of Africa to the frozen regions of the north, it is observed that all-provident Nature, with a view to the preservation of animal life and health, has carefully accommodated the habits and customs of the inhabitants to the temperature they are destined to be exposed to. In the colder climes, she has inured them to a life of exercise, and has even made fatigue habitual to them : their natural diversions are all of the athletic, or

more violent kind, and they are accustomed to activity, not less from choice, than from the necessity of their situation, which renders requisite a frequent stimulus to the calorific powers of the animal frame. Unhappily the innovations of modern luxury and refinement have perverted her intentions, and deprived them of their natural defence against the influence of their inclement atmosphere.

Nothing so much contributes to enervate the powers of the human frame as an excess of artificial heat : universal listlessness, sickening langour, and an inaptitude or incapacity from exertion, are its never-failing effects ; every nerve is unstrung, the muscles lose their wonted contractility, and the system is rendered totally incapable

of being excited to vigorous and healthy action ; an excessive sensibility supervenes, which renders the whole frame morbidly alive to every unusual impression, and open to the attack of every noxious power.

It is to be lamented, that the enfeebling effeminacy of manners, more especially prevalent among the middle and higher classes of society, has rendered high degrees of temperature essential to the maintenance of pleasurable sensation. The ruinous effect of this indulgence is, that our health and comfort are destroyed by the frequent recurrence of some or other of those disorders which have their origin in cold. Debilitated by the perpetual stimulus of heat, we become sensible to every, even the slightest, variation of atmospheri-

cal temperature. When necessity forces us to face the wintry air, the heat of the external parts is rapidly reduced below the natural standard ; we become chilly and comfortless, shiver at every ruder breath, and hasten, within the baneful influence of external heat, to enjoy an artificial state of grateful feeling ; in consequence of which the tone and re-acting powers compatible with health are lost, and the body is left a prey to the diseases peculiar to our situation.

Let those, therefore, who have at heart the preservation of their health, and the vigour of whose frames is as yet entire, carefully avoid making this effeminate indulgence necessary to their comfort. Let them, by gradually training themselves to bear the impressions of cold, endeavour to

induce that enviable state of hardiness that will enable them to brave, with impunity, the vicissitudes of the atmosphere of our climate. This they will, in great measure, be able to accomplish, *by living in cool rooms, by accustoming themselves to regular exercise, in the open air, during the colder months, by habitual cold bathing, and by abstaining from the use of large quantities of warm enervating liquids.*

By adopting these means they will soon cease to be the subject of unpleasant chills and flushings; they will lose that nervous irritability, which rendered them so exquisitely and distressingly alive to every change of feeling; they will no longer shiver at the winter breeze; and, when exposed to cold,

a genial healthy glow will effectually ensure them from its ill effects.

Few of the refinements of modern luxury are more prejudicial to health, by rendering the body susceptible of cold, than the living in rooms heated by enormous fires, and rendered impermeable to every breath of air.

“ Let lofty ceilings grace your ample rooms,
And still, at azure noontide, may your dome
At every window drink the liquid sky.

* * * * *

Else every breath of ruder wind will strike
Your tender body through with rapid pains;
Fierce coughs will tease you, hoarseness bind your
voice,
Or moist gravedo load your aching brows.”

With regard to the size of rooms indeed, it is true, there are not many, comparatively speaking, who have the advantage of a choice in this respect; but it is in the power of every one to render the apartments they occupy cool and airy; and there are none, perhaps, who have it not in their power, more or less frequently during the day, to breathe the open air without doors. When necessity compels to a sedentary life, the heat created by fire, during the colder months, should never perhaps, except in cases of indisposition, exceed the medium between the usual summer warmth and the cold of freezing*.

* England, Holland, and the northern parts of Germany, are upon the same latitude, and the transitions from heat to cold are, in all of them, almost equally great and frequent. Observe the difference

In endeavouring, however, to habituate the system to two degrees of temperature, one caution is of the most essential impor-

of their effects upon the constitution of the inhabitants, as influenced by the difference of their habits and customs. The Dutch accustom themselves to live in rooms as *airy* and *cool* as possible; their dress is of *equable warmth*, and constantly regulated by change of feeling; they seldom become the subjects of catarrh. The English, their neighbours on the one side, live in apartments which are maintained of as high a degree of *warmth* as possible; their dress is almost equally light at every season of the year; they are incessantly tormented with coughs. In Germany, on the other side, the *heat* to which the generality of the inhabitants expose themselves, from their ovens and stoves, is sufficient to suffocate any one who has accustomed himself only to a moderate degree of warmth; they are said to be equally liable to catarrhs and consequent consumptions.

tance to be attended to; namely, never to remain inactive, either in the open air or in cool apartments, long enough to induce a continued and unpleasant sensation of actual cold. This, in all cases, would effectually counteract the design proposed, and by frequent repetition would, in all probability, ultimately be sufficient to injure the strongest constitution: the sedative operation of cold would commence, the natural powers which generate heat would yield to its influence, and the subsequent application of heat, unless very gradual, would, in those more particularly predisposed, produce a state of catarrhal inflammation.

There are very few, even the most weakly, but can use muscular exertion enough to excite an increased action of the

heart and arteries, and consequent evolution of heat over the surface of the body. The exercise employed for this purpose should uniformly approach as near as possible to the borders of fatigue, but should never exceed them; and a grateful sense of natural warmth, a heightened complexion, and an unusual alertness and freshness of feeling, should be the criterion of its good effects. "Of all kinds of exercise, or muscular action, walking, for its equable diffusion of motion through the whole animal system, is unquestionably best; riding is next to walking; as to lolling in a carriage, unless one is too weak to bear any other motion, it only serves to rob one of the benefit of the more effectual and even more pleasant exercise of one's limbs." Various gymnastic exercises, within doors, may at all times be

advantageously resorted to in unfavourable weather; as skipping the rope, using the dumb-bells, battledore and shuttle-cock, &c., &c.

The necessity of habitual exposure to cold, in early life, cannot be too strongly insisted upon. Except during the hours dedicated to instruction, and other necessary employments, or when the weather is rainy, or the atmosphere is impregnated with moisture in the form of fog (at which times the room they occupy should be of a comfortable degree of warmth), children should be constantly in the open air, their hands and feet, only, guarded by warm clothing; and the more vigorous their sports, the more will their frames be rendered robust*.

* A sedentary life, or occupations that require little exertion, in a short time not only impair the

Let the anxious parent, who with mistaken care assiduously screens her children from the wintry sky, compare their tender forms and pallid hue to the rosy bloom

power, but also destroy the desire to exert the muscles of voluntary motion, more particularly in early life, before they are completely formed. This is too often the case in female boarding-schools, where the children, in consequence of confinement, and of the delicacy of frame that it produces, acquire an utter aversion to move, and a horror for any temperature below spring heat. "To my questions on the subject of skipping, playing, and using the dumb-bells," observes Dr. Beddoes, "we would always ten times rather sit by the fire,—we never exerted ourselves when we could avoid it,—it is amazing how indolent we all were,—have been the never-failing answers."

Hygeia, vol. 1. *ess.* 3. *p.* 48. Confinement to boys is not less injurious; and in after-life contributes to the most deplorable maladies both of body and mind.

and lusty make of little cottage rustics. Can she contemplate without envying that healthy vigour of frame, which sets at defiance the utmost rigour of the element, and which all her fond indulgence has failed to produce?

Another practice, equally injurious, is that of sleeping in heated apartments, upon beds of down, artificially warmed, and under a heap of bed-clothes. The morbid irritability of the sentient extremities of the nerves, produced by habits of indulgence, renders it necessary for the voluptuary that his bed should be of the softest materials: unable to bear the chilling touch of the cold sheets, these are warmed to a degree beyond the natural heat of his body, and,

to maintain this temperature, a suffocating load of clothes is imposed, and the surrounding air is rarified by the bed-room stove. All these luxurious incentives to rest he, however, usually finds insufficient: a feverish state is excited, his sleep is disturbed by uneasy dreams; and, upon awaking, instead of being refreshed, and feeling renovated strength, he is irritable, languid, spent, spiritless, and uncomfortably chilly; and so he continues until a state of forced excitement restores him to his wanted feeling. How different the sleep of the industrious labourer, when, weary with healthy exercise, he sinks upon his *cold, hard* couch; or, perhaps, deprived even of this, upon his bed of straw! The powers of his constitution are unimpaired

by luxury, and nature soon excites a general heat that lulls him to refreshing slumber. His sleep is undisturbed, and in the morning he feels his vigour restored, and he is enabled to resume his laborious occupations with ease and pleasure.

In the strong and healthy, the sensation of cold communicated by the linen, upon first getting into bed, operates, in great measure, as an instantaneous immersion in cold water. It abstracts a portion of heat from the surface of the body, which is succeeded by an increased evolution, or a glow of warmth, and this a moderate degree of covering is generally sufficient to keep up. In order to ensure this effect, however, it is necessary for the body to be previously mo-

derately warm*. If those who are in the habit of having their beds warmed would summon resolution to try the experiment, how much more grateful would they find this natural warmth than the forced sensation they are accustomed to !

Injurious, however, as is the practice of bed-warming, its total abolition would, perhaps, be hardly less so than its general use. There are many cases in which it is

* It is a common and a just observation, that if you get into bed cold and chilly, you will remain so during the greater part of the night. In this case, the temperature of the body being previously reduced, the cold bed fails to produce its tonic effect. It should be a rule, therefore, always to acquire a moderate warmth immediately previous to retiring to rest.

necessary, as well as salutary ; as in very severe seasons to the delicate and sickly ; but in no case should the bed be heated to more than about 60 or 70 degrees. Those likewise who live in habits of luxury, more particularly females, should be extremely cautious, when the weather is very cold, not to remain long in a room without a fire, with less than their usual covering*. For

* “ I here,” observes Dr. Beddoes, “ expressly subjoin, that the direction for extinguishing bed-room fires is not to be extended to the time when girls are dressing for public places, in winter. I have known dangerous complaints take place, apparently from this cause, in families where a parental prohibition issued against a fire, on such occasions, though the voice and feelings of a daughter joined to call for it. When one considers what a frequent business it is, at some places, to prepare for the ball, it is not too much to assert, that one season’s dress-

this reason, bed-room fires, producing a temperature of about 45 or 50 degrees, are necessary during the periods of dressing. But in all those cases where mere personal feeling is the only motive for these indulgences, the relinquishing them will, I am convinced, prove an important step towards the banishing of *colds*, which are now more than ever frequent and troublesome.

Of all the means within our reach for strengthening the powers of the constitution, and producing hardiness, regular *cold bathing* is perhaps the most effectual; but it is more than any other liable to be abused: for this reason it may not be im-

ing in the cold may undermine the firmest female constitution." *Beddoes' Hygeia*, vol. 2. *ess.* 1. *p.* 56.

proper, in the present place, to lay down a few rules by which its use should be conducted. The *time* chosen for the purpose should be the early part of the day, and never during the relaxing influence of the meridian sun ; the *immersion* should be sudden and regularly repeated ; *previous to the immersion* a gentle sense of dry warmth should be produced upon the surface of the body by moderate exercise ; there should be no sense of *chilliness* present, nor *actual coldness* to the touch of another person, nor any partial nor general *perspiration*, nor the *debility* induced by *fatigue* ; the *stomach* should neither be empty nor overcharged.

It is of the utmost importance for every one who seeks to invigorate their frames by the cold bath, to examine well the state of

their feeling prior to its use. A person who approaches the brink trembling and fearful, or in a state of actual cold, unwillingly plunges into the stream, and afterwards, instead of experiencing a healthy glow of heat, feels chilly and uncomfortable, instead of being invigorated, will, upon every successive trial, be rendered more debile*.

* “ The popular opinion that it is safest to go perfectly cool into the water is founded on erroneous notions, and is sometimes productive of injurious consequences. Thus persons heated and beginning to sweat often think it necessary to wait on the edge of the bath until they are perfectly cooled, and then plunging into the water, feel a sudden chilliness that is alarming and dangerous. In such cases the injury is generally imputed to going into the water too warm, whereas in truth it arises from going in too cold.” *Currie* (of Liverpool).

Long continued bathing is equally improper. The effect of the sudden application of water of a low temperature is universally strengthening. It is, as was before observed, an attack upon the natural powers that generate heat, in consequence of which their re-action is excited, and a greater portion of caloric is thrown out upon the surface, from which it had been previously abstracted by the cold medium. Its long continued application is as universally debilitating; for, after a short time, the heat of the body begins to be subducted faster than it can be supplied. This is not the case, however, when vigorous muscular exertion is used at the same time, as in the act of swimming; yet, even in this case, the remaining too long in the water is

generally productive of debility, and should therefore be avoided*.

* In very delicate constitutions, *cold* bathing has been sometimes found gradually to increase the debility of the system, and ultimately to induce the most alarming state of disease ; whereas, on the contrary, *tepid* bathing has proved invigorating. Vide the observations of Dr. Beddoes on *cold*, *cool*, and *tepid* bathing, *Essay on Consumption* ; and of Dr. Buchan in his *Essay on cold and warm bathing*. Even in the stoutest, the too long continued, too frequently repeated, or otherwise injudicious use of the *cold* bath, instead of strengthening the powers of the constitution, will be found uniformly prejudicial to health. Every one who has been much in the habit of bathing, after having remained for too long a time in the water, must occasionally have felt his frame pervaded by an almost death-like languor. Whenever this is the case, debility is the only effect. In certain constitutions, however, and under some particular states of body, very long continued im-

The pernicious effects of cold bathing during the presence of profuse perspiration

mersions in cold water are not only borne with impunity, but are, on the contrary, in the highest degree salutary and refreshing; a very remarkable instance of which is related upon the authority of Dr. Robertson, late surgeon-general of the navy hospital in Barbadoes.—A gentleman in this island, a great votary of Bacchus, was in the practice, from fifteen to twenty years, of plunging into cold water when he rose from his bottle, and of actually going to sleep in a trough full of water, with his head supported on a kind of wooden pillow, made for the purpose, above the surface. In this watery bed he would sleep one, two, three, or even more hours, experiencing always the greatest refreshment. His wife and family, when they wished him to change his quarters, used to draw out the plug, and let the water run off, when he awoke, and humorously complained of the loss of his bed-clothes. *Extract of a letter from Dr. Robertson. Vide Currie's (of Liverpool) Medical Reports, vol. 1. p. 294.*

are too generally known and justly dreaded to require any comment*.

* It is probable that in a state of moderate perspiration, where the heat of the body is still considerable, and the strength has not been exhausted by excessive exertion, an immersion in water, however cold, would never be found hurtful. The effects of immersion, or of any sudden and great application of cold, are only to be dreaded when sweating (more especially if this has been excited by long continued or vehement muscular exertion), after having been profuse, is upon the decline; when the heat is, in consequence, rapidly diminishing; and the body is, at the same time, under the influence of languor and fatigue: and, in these cases, the mischief, probably, seldom arises from the suppression of the sweat (as is the commonly received opinion), but from the great and sudden operation of cold upon the vital principle residing in the nervous system, at this time particularly sensible to its attack.

The influence of the different temperatures and stimulating properties of fluids, taken into the stomach, in producing catarrh, has already been spoken of; it is intended in this place only to insist upon the bad effects of the custom of drinking large quantities of warm, sedative, and enervating liquids; of which the chief is excess of *tea drinking*.

It has been imagined by many, that *tea* has been unjustly accused, and that the ill effects, usually ascribed to it, may, with greater propriety, be referred to other causes; I am well convinced, however, of the contrary, and numerous respectable authorities are not wanting in support of the opinion*.

* Vide what is said on the subject of tea drinking, by Dr. Whytt, *Treatise on the Nerves*; Michell on

The abuse of tea is almost peculiar to the female sex ; and it is prevalent alike through every class of society, from the cottager to the duchess. Among the poor of large towns, it forms a principal article of diet. It heightens the feelings, produces a temporary exhilaration of spirits, and creates a state approaching to intoxication : they therefore prefer it to more substantial aliment. Although the poison which it instils is slow in its operation, yet, sooner or later, its effects become perceptible ; an unaccountable depression of spirits, universal languor, and an indescribable sensation of imbecility and sinking pervade the frame ; every nerve becomes inordinately irritable, and the moving fibres with which

*Nervous Diseases ; Murray App. Medicaminum ;
Beddoes' Hygeia ; Willich on Diet and Regimen.*

they are connected are thrown, by the slightest causes, into various convulsive motions; the whole system becomes exquisitely sensible, and a long train of nervous diseases and indigestion infallibly ensue; added to which an excessive propensity to catching cold is its never-failing and not least unpleasant effect.

2. In a climate so variable as ours, where the extremes of heat and cold succeed each other in such capricious alternation, we can hardly hope to be successful in the banishing colds, while such a total inattention prevails to the *adapting dress to temperature and feeling*.

It is indeed among the females of our island that this inattention is most observa-

ble : to use the language of an elegant writer, Wherever the enchantress Fashion waves her wand, they are compelled to expose themselves, half undressed, to the influence of fog and frost ; thus sacrificing health and personal comfort to mistaken ideas of elegance.

Woollen, as an article of female attire, seems now to be universally laid aside ; every part of fashionable dress being equally permeable to the keen air. Motives of delicacy, as well as regard for health, have been repeatedly urged in vain to enforce the necessity of relinquishing these destructive habits* ; the arguments of the

* On the subject of female dress, vide a pamphlet entitled, " Remarks on Modern Female Manners,

moralist, and of the physician, having alike failed to convey conviction ; and hundreds, who would now have shone forth among the loveliest of their sex, have been dressed in shrouds, because, “ in an evil hour, they laid aside those parts of their apparel which health, as well as decency, forbade them to relinquish*.”

as distinguished by Indifference for Character, and Indecency of Dress.”

* The pernicious influence of the modern passion for *light clothing*, “ so prevalent among all ranks, and so unsuitable to different constitutions,” cannot be more strikingly exemplified than in the case of the lower order of inhabitants, in different parts of Scotland. In this part of our island, colds were extremely rare, and consumptions seldom met with, until the extension of commerce pushed the goods manufactured at Manchester into the farthest recesses of Great Britain ; but after the period when

There are two parts of the body which are more especially liable to receive the ill impressions of cold, and communicate them to the rest; these are the feet and chest; and, in the delicate and susceptible, if fashion is conceded to in other respects, these at least should be defended with the utmost care (12). The most effectual method of doing this, is to cover them with substances which conduct heat the slowest, such as flannel, fleecy hosiery, and woollen of every description.

The wearing of woollen next to the skin the "thick, warm Scottish plaiding was relinquished for the fine, cold English cloth," these disorders became extremely rife, and are now, perhaps, even more frequent than in the southern parts of the island. *Vide Statistical Reports, vol. 3. p. 427.*

has been objected to by some writers upon plausible grounds; but experience, the only criterion by which our judgment should be influenced, has authorized us in considering it not only as the most effectual preservative against cold, but as in every other respect salutary to the constitution* (13).

* “ Those officers and soldiers who wore flannel waistcoats next to their skins not only escaped colds, but dysenteries, and other contagious disorders; while those that wore none were soon carried off by the diseases so commonly fatal in camps.” *Dr. Rush*. See *Dr. Moseley’s Observations on Clothing*, in his *Treatise on Tropical Diseases*. The use of flannel in early life has been objected to by *Dr. Hufeland*, and upon reasonable grounds (*Med. and Phys. Journal*, 1. p. 40. *et seq.*); but if it were worn by every young person from the age of fifteen to twenty-six, consumptions, I am convinced, would soon diminish in frequency. *Fleecy hosiery* has of late

The unpleasant sensation at first excited by woollen applied to the skin will soon be found to wear off, and it is a well-known fact, that it not only preserves the warmth of the body in winter, but renders the part it covers more sensibly cool in summer, by absorbing the cutaneous perspiration* (14).

been much employed; and it appears to possess many advantages over common flannel. See a pamphlet on the use of Fleecy Hosiery, by Dr. Buchan.

* The manufacturers in the different founderies of Birmingham, as well as at the iron works at Colebrook-dale and Kettley, in the most intense heats, wear no other than flannel shirts: without these it would be impossible for them to prevent frequent colds and the most fatal diseases. The salubrity of woollen, from its power of absorption, is also amply proved by the experiments of count Rumford (15).

While, however, we are thus careful to guard against the morbid influence of cold, by accommodating our dress to the weather, we should be equally cautious not to run into the opposite extreme ; too much clothing produces a delicacy of frame, that disposes no less to disease than an imprudent disregard of necessary covering*.

3. It has been before observed, that the action of cold upon the human body, unless it be either extreme in degree, or impro-

* Dr. Willich proposes the adopting a general dress for all seasons. He observes, " As thin clothes are more immediately pervaded by heat, during the least exercise, it certainly would be more prudent and rational to wear a dress that is calculated to withstand the effects both of heat and cold." In a more equable climate, perhaps, this might be practicable.

perly or incautiously applied, is seldom productive of any bad effects ; for the animal frame, supported by its inherent heat, can bear a very considerable diminution of temperature without injury. It has also already been seen, that, in order to produce catarrh, and other inflammatory diseases, it is necessary that its action should be rather on the ^{one} hand excessive or long continued, or on the other sudden, or happening under such peculiarity of circumstances as particularly dispose the body to be susceptible of its operation*. Hence we may lay down the following rules : namely,

1st. When over-heated, more particularly at a time when inordinate heat of body

* Vide page 59.

is combined with perspiration, never expose yourself suddenly to the action of a low temperature*.

* It has been asserted, by some late writers, that the transition from heat to cold would never be followed by ill effects, if the succeeding change from cold to natural warmth were gradual and properly conducted, but, in the greater number of catarrhs, the inflammation is not produced by the abuse of *external heat*, but by an increased exertion of the native calorific powers, subsequent to the state of chill, and which no precaution will be sufficient to prevent. The popular opinion, that the mischief arising from changes of temperature depends upon the sudden transition from great degrees of heat to cold is certainly founded in error: it seems indeed to be an established truth, that, from whatever cause the heat of the body is increased, in proportion to this increase is the safety with which cold may be applied; provided it be applied *freely*, and *before*

2dly. After having been chilled by cold, applied under any of the circumstances

the *heat begins to decline*. Of this we have a proof in the experiments of Dr. Fordyce, sir Ch. Blagden, and others, in which these gentlemen frequently passed from a room heated to 200 degrees and upwards into the cold air with perfect safety. Vide *Philosophical Transactions*, vol. lxxv. p. 111 and 484. The same fact is also established by the common custom which the inhabitants of Russia have, of first bathing in water heated to as high a degree as the body can bear, and immediately afterwards rolling themselves in snow. But it appears equally certain, that the greater the heat of the body, the more susceptible it is of the morbid impression of cold, applied under those particular circumstances which forms its operation; or, in other words, than the triple succession of, first, heat, more especially if accompanied with fatigue of body; secondly, the modification of cold before mentioned; thirdly, heat, either

above mentioned, be careful to restore the natural heat of the body by gentle degrees; by either first going into a room which has no fire in it, or by keeping, for a considerable time, at a distance from the fire, until you acquire your natural warmth and state of feeling (17).

3dly. After having been exposed to severe cold, be cautious to abstain from the immediate use of warm or stimulating liquids (17).

artificial or natural, is most likely to be productive of catarrh and other inflammatory diseases. Vide *Beddoes' Hygeia*, vol. 2. c. 1.

II. *The application of chemical or mechanical stimuli to the mucous membrane which lines the air passages.*

Under this head I include sudden changes in the stimulating *quality* of the atmosphere, and the inhaling of certain extraneous stimuli with the common air.

The breathing of an innumerable multitude of animals, together with the various processes of combustion and putrefaction, incessantly in action, are continually diminishing the quantity of pure or vital air contained in the atmosphere, which, in all probability, would long since have become too impure for the support of life, had not the all-wise Author of Nature provided for

its continual re-production, by means equally simple and admirable—the decomposition of water by the vegetable kingdom.

The numerous tribes of vegetables, scattered every where over the earth, absorb water and air, both from the ground and ambient atmosphere ; and, by the action of their various glands, reduce it to its original principles ; namely, *oxygen*, or *pure air*, and *hydrogen*, or *inflammable air**.

* “ Water, according to the opinions of modern chemists, is a compound fluid, made up of two substances, neither of which can be exhibited separately, except in the gaseous form ; and, when aeri-form, they are known, the one as *hydrogen gas*, or *inflammable air*, the other as *oxygen gas*, or *vital air*. These gasses, in the proportion of about three of

The former of these they breathe out in a state of great purity, from the innumerable air vessels, scattered over the surface of their leaves ; and, contrary to what happens with animals, they take the latter for their own nourishment (18).

The more the atmosphere abounds with vital air, the more it is stimulating to the animal frame, and *vice versa*. Now, from what has been said above, it is evident that wherever combustion and respiration are performed upon a large scale, as in populous towns, there the air must be proportionately less pure, and in consequence less *hydrogen* to eleven of *oxygen*, when united, and reduced from the form of an air to that of a liquid (as may be done artificially by means of the electric fluid), constitute the fluid, *water*.

stimulating; and that, on the contrary, wherever vegetation is most luxuriant, it must contain a larger portion of oxygen, or stimulating principle (19).

The effect which this difference in the quality of the atmosphere has upon the human body, is often the subject of common observation; but it has not, I believe, been generally observed, that the transition from a less to a more stimulating air will produce an actual state of catarrh: that it occasionally does so, however, there can be no doubt. It is very common for a person who has long breathed only the contaminated atmosphere of a large city, upon going into the country, to be seized with a stuffing of the head, hoarseness, heat and dryness of skin, and other symptoms of

violent cold : which is generally ascribed to some other cause. This, however, is more frequently the case with children, whose mucous membrane is sensible to every cause of irritation (20).

Upon my accidentally mentioning this occasional cause of catarrh, upon a visit to a family I am in the habit of attending, a lady present related to me the following remarkable case, which occurred to two of her own children, the one a boy about four years old, the other a girl about two years older ; both of delicate and sickly habit. As business compelled her to reside in one of the closest parts of the town, she considered an occasional change of air necessary to the improvement of their health, and had usually sent them, once a month, to

spend a few days with a relation at Hampstead, where they might breathe a purer atmosphere ; but almost as constantly as she did so, so surely did they become the subjects of cough and other symptoms of cold ; which often continued for several days after their return to town. This circumstance she had, until then, attributed to a supposed exposure to cold, or humid air. I convinced her, however, of the contrary, by advising her to send the children, for an hour, every day, to the outskirts of the town ; and, in consequence of adopting this plan, she has since informed me, their periodical visits to Hampstead have been made with perfect impunity.

This is one grand reason why the children of those who are obliged to reside

constantly in large and crowded towns, should be daily sent into the country, or at least to such a situation as will enable them to breathe an air of a little more purity ; by which means they will not only avoid suffering from every change of air, but will also acquire a rosy bloom, in vain looked for among the puny, delicate little beings, who are constantly confined within a highly contaminated atmosphere.

Any irritating matter, of whatever description, received into the air passages, will, in the irritable, produce a genuine catarrh. Such are various stimuli which are occasionally applied to the nostrils or wind-pipe, either purposely or accidentally. Two of the most violent and most speedily fatal cases from catarrhal affections I ever met

with arose from this cause; the one occurred in a young girl who had been employed in picking of feathers; the other was in an elderly female, into whose snuff-box a little wag had silyly introduced some powdered hellebore. A slight catarrh is by no means unfrequently produced by a person taking a pinch of snuff, who is not a habitual snuff-taker. This has been observed perhaps by every one; but in some instances the symptoms produced by this cause rise to so high a degree, as to require a medical regimen, of which I have known several instances, and have heard of many similar ones, in which the same effect ensued from the inspiring of ammonia, aromatic vinegar, and other diffusible stimuli*.

* "I am acquainted," says Dr. Beddoes, "with a person in whom a pinch of ordinary snuff will pro-

But it is not often, except, indeed, when the more subtle particles of dust are held buoyant, that we are liable to breathe an air impregnated with every consequential extraneous matter*. This is a fate, happily

duce sneezing in the first place, and afterwards a genuine catarrh." *Hygeia*, *ess.* 7. *p.* 34. A case is related by Dr. Fourcroy of an apothecary, at Argentan, in whom a fatal cough was excited by the fumes arising from the materials employed for making liver of antimony. M. Morveau, Vauquelin, and others, describe the effect of inspiring the oxygenated muriatic acid gas to have been a severe cough, sneezing, and other symptoms in every respect resembling common cold. Vide *Moyens de desinfecter l'air*. Several other active gasses and chemical fumes have the same effect (21).

* Vide *Weikard*, *verm. schz.* II. *p.* 185. I. *p.* 1. The odour of roses, and other flowers, is said to

almost peculiar to artizans who are constantly under the influence of an atmosphere, filled with irritating particles of minerals, or vegetable filaments; the consequence of their inhaling which is a perpetual recurrence of symptoms perfectly analogous to common cold, and, at no distant period, a confirmed and fatal disease of the lungs*.

have produced catarrh (Ephem. nat. cur. dec. 11. and 5. ob. 22.); and from the account of Ramazzini, Morgagni, and some other writers, we are led to believe, that the breathing of a dusty atmosphere not only proves an occasional cause of coughs, but has in some instances had the effect of applying such an irritation to the lungs, as to produce a fatal tubercular inflammation.

* Vide what was said on this subject when speaking of an irritable state of the lungs as predisposing to *catarrh*, *p.* 32.

III. *The application of moisture to the whole or part of the body.*

The operation of moisture upon the living body is singular and difficult to explain: but, that it does often produce the worst consequences, there can be no doubt, although the contrary opinion has been entertained by a most respectable and experienced physician* (22).

I believe it is the common idea, that moisture operates in the production of catarrh, either in consequence of its being combined with a very diminished temperature, or by producing a state of

* Dr. Heberden. *See Medical Transactions, vol. 2.*

chill, or sensible cold. That this is most frequently the case is clear; but it is equally certain, that *damp*, or moisture, will lay the foundation for inflammatory action, without being combined with actual *cold*; and that the same effect will be produced by *cold*, without any combination with moisture. The latter proves equally noxious when applied above the medium warmth, and where no subsequent evaporation can take place from the surface of the body, to reduce its temperature. In the case of catarrh, or other disorders arising from the sleeping in damp sheets, the person, upon getting into bed, usually feels no very uncomfortable sensation of cold; he soon acquires the usual genial heat of the bed, and falls into the state of sleep; but, in the morning, awakes with a con-

fused perception of disorder, which, in the course of the succeeding day, puts on a characteristic form ; here the application of moisture is neither accompanied nor succeeded by positive cold. So, likewise, when a person of a susceptible pulmonary system is exposed to a fog, or an atmosphere loaded with watery particles, the temperature of the air with which he is surrounded may be even grateful to his feelings, and yet he will probably soon begin to sneeze, and shortly afterwards experience all the other incipient symptoms of catarrh.

Moisture appears to operate in the production of catarrh, in the same way as cold, by proving a sedative ; but, in order to its sedative operation, it seems necessary

that the particles of water be extremely minute, and spread over a large extent of surface. This is the case when the body is exposed to the influence of a moist atmosphere, or where moist linen is applied to the whole or any susceptible part of it, or where any part of dress, after having been wetted, is suffered to remain unchanged, and to dry upon the part* (23).

The feet are most liable to receive the impressions of damp, as they are of cold ; hence one of the most frequent causes of

* It is worthy of remark, that damp, created by pure water, is more injurious than that arising from water in which salt has been dissolved. This is well known to seafaring men, who get wet with impunity with sea water, but are extremely liable to catarrh, rheumatism, &c., &c., from exposure to the

catarrh is getting wet in the feet ; which it is of importance for those who are liable to the complaint to guard against, by the means before recommended.

IV. *Certain intemperaries of the atmosphere, independent of its sensible qualities.*

The chemical composition of the air which we breathe is now well known ; but, besides those properties which are discoverable by the assistance of particular

rain. Probably the salt may stimulate the vessels of the skin in some way that counteracts the sedative and debilitating action of the moisture. Vide Dr. Currie's (of Liverpool) very interesting account of the effect of cold and moisture upon some shipwrecked mariners. Reports, vol. 1.

instruments, it abounds with subtle agents, which, although not cognizable by our senses, yet have the power to effect the most important changes in the animal frame. Certain it is, that the atmosphere, notwithstanding the endismetrical properties and sensible qualities remain the same, has, at different times, very different effects on man, and renders, by its peculiar constitution, certain diseases predominant for months, and even years, without any proof of their arising from contagion, or proceeding from any other assignable cause.

Of the complaints which are thus occasionally prevalent, independent of *weather*, and under the most apparently healthy state of atmosphere, none is so frequent as *catarrh*. We can only account for this difference

in the effects of the air which surrounds us, by supposing it to depend upon the mode and degree of combination of its ingredients. It has been imagined, that “ the particular *electric* state of air, as connected with *Galvanic influence*, may have considerable power in occasioning healthy or morbid effects from the atmosphere*.”

Other exciting causes of catarrh have been enumerated by authors, but they are, perhaps, still less determinable†.

After enumerating its various *causes*, I

* Vide *Syllabus of a course of lectures, read at Guy's hospital, by Dr. Babington and Dr. Currie* (of Liverpool).

† Vide *Willich Diss. de frequenti catarrhorum é primis viis origine* Goef. 1777.

now proceed to the consideration of the means recommended to be employed for the *cure* of catarrh. These are more various, perhaps, than in any other complaint. It is a disorder, indeed, in which, in consequence of its very great prevalence among all classes of people, the generality of individuals, in applying the means of cure, are of necessity their own physicians, and almost every one has his particular plan of treatment. No less a diversity prevails among medical men; their opinions and practice varying with the different ideas entertained, at different times, and by different physicians, with regard to the origin of the disorder.

After the expulsion of the *humeral pathology* from the schools of medicine, the

idea long entertained of the nature of this disease was, that it originated in a sudden suppression of perspiration, and *spasm*, or stricture upon the orifices of the perspiratory vessels, consequent upon the action of cold applied to the surface of the body; which it was necessary to resolve, in order to the solution of the complaint. Under this idea, the means which naturally suggested themselves were, *external warmth*, the free use of *diaphoretics*, and a large proportion of warm *aqueous diluents*.

And although the doctrine of spasm is now almost universally exploded, yet the practice it gave rise to still continues to be that most commonly employed. Within these few late years, however, since improvements in physiology have thrown more

light upon the nature of disease, a mode of treatment, precisely the reverse of the former, has been suggested in theory, and, in some instances, reduced to practice. This consists in attempting to remove the inflammatory action which constitutes the disorder, by the application of external cold. This, I believe (as far as relates to catarrh), had its origin in the particular opinions entertained by Dr. John Brown, but it has since been taken up and recommended by several writers on domestic medicine* (24).

The chief of the plans of cure, therefore, recommended by authors, are diametrically opposite. By one class of writers, the patient is enjoined to a strict confinement to

* *Brunonis Elem. Medicinæ, vol. II. p. 42. et seq.*

the house, to guard carefully against the influence of external cold, by warm clothing, and by the use of warm relaxing liquids. By the other, on the contrary, he is recommended to a free exposure to external cold, by remaining in an atmosphere of “ a temperature little exceeding that by which the complaint was induced ;” to diminish his clothing, and to abstain from the taking of any thing warm.

Amid such a contrariety of opinion, how is the invalid, who usually collects the little knowledge of medicine he may happen to possess from popular writings, to be influenced in forming his judgment of the propriety of adopting the one, in preference to the other ?

The absurdity of increasing the heat of the body, in order to get rid of an inflammation actually going on in a part of it, need not be insisted upon. It must be obvious to every one who has duly considered the nature of the disorder, and the mode of operation of the causes that induce it, that such a plan of treatment is, of all others, most calculated to render it as severe as possible. The opposite practice, however, or the diminishing the temperature of the body in general, in order to abstract heat, and consequently diminish inflammatory action in a particular part, is hardly less objectionable (25).

Of all the improvements which have been made, for many years, in the practice of medicine, the introduction of the use of

external cold in the treatment of acute diseases may, perhaps, be regarded as the greatest and most important. The theory upon which it is founded is rational, and the practice it has led to has been attended with the most happy effects. In *fevers, inflammations, and eruptive disorders*, it has restored thousands that would otherwise have sunk under the influence of disease; and, perhaps, in the whole catalogue of inflammatory or febrile affections, there is one only in which its *free and extensive* use is inadmissible: this is the disease which forms the subject of the present essay (26).

Of nothing am I more firmly convinced, than, were the idea to become general, that nothing more is necessary, in order to

cure a cold, than to expose the body afresh to a low temperature, the death of those who adopted it would be the most frequent consequence: either the original mischief would be often spread wider, or the foundation would be laid for other diseases, more consequential than that which was thus sought to be removed.

Unfortunately, theory, in the treatment of this complaint, cannot with safety be reduced to practice. If it were in our power to apply the remedy immediately, and only to the surface of the inflamed membrane, it is probable that nothing more than the repeated local application of cold would be necessary, in order to cure the most severe catarrh: but this is impracticable; we can only apply cold to the pulmonary sys-

tem, through the medium of the air, in which case not only every part of the membrane lining the bronchiæ, but also the whole of the body, must be équally subjected to its influence, and, in consequence, the remedy, carried to such an extent as to be efficient in diminishing the inflammation, would be as likely to induce a fresh disease, subsequently, in another part, as to remove the original*.

* It is with due deference to the opinion of Dr. Beddoes, that I differ so widely from him in opinion on the present subject. The following are his observations on the treatment of colds:

“Cool treatment is just as necessary to prevent catarrh as to mitigate the small pox: the analogy of frozen limbs should be strictly followed. We cannot, indeed, rub the nostrils, and the continuation of the mucous membrane, with snow or cold water;

I have not been led to the foregoing remarks by mere theory : various cases that but we can do what amounts exactly to the same thing, we can keep an atmosphere, not much exceeding in temperature that by which these parts have been chilled, traversing them for any length of time.”—“ When the dryness in the nostrils, the huskiness in the throat, and other feelings denoting the commencement of catarrh, have arisen from the chill of a distant part, the same expedient will be equally proper for precaution and mitigation.”—“ The effect of continuing for a time in a low temperature, after a chill of the mucous membrane, may be materially assisted by drinking cold water ; and where there is a strong propensity to catarrh, the food should be taken cold, and all warm and heating liquids should be carefully avoided for the day.”—“ In an incipient catarrh, those who continue moving in the cold for some hours will find it greatly reduced if not entirely taken off ; but they must not afterwards heat themselves ; they may sit, at times, as well

have fallen within my own immediate observation have amply confirmed their justice. I will only beg leave, however, to relate the following, of the circumstances attending which I was an eye-witness. A gentleman, about the middle age, and of the sanguineous temperament, who had been extremely subject to severe colds, upon reading a remarkable instance of the good effects of this refrigerating mode of treatment*, resolved to imitate it in his own

as walk; covering the extremities so as to prevent them from being chilled. The object is to apply a cool medium" to the inflamed mucous membrane. —“ It is probable that giving up a single night's sleep would be attended with the happiest effect in such cases.”

* *West country contributions*.—A boy in the service of Dr. Hamilton, of Ipswich, with a considerable

case. He had, in former colds, been accustomed to employ the common warm,

cough, and febrile heat, played the truant one evening in February, 1797, and passed the whole night walking or sitting in the streets. The night was the coldest of that season, the thermometer, at seven o'clock the next morning, standing at 10 degrees below the freezing point. As the boy's complaint was somewhat alarming, Dr. Hamilton felt considerable uneasiness lest it should increase, from his being first heated, as he presumed, by play, and then suddenly cooled by the frost : but, during the interrogation he underwent next morning, it was observed he did not once cough, although, in the same space of time before, the cough would have often harrassed him, and interrupted his narrative. " I watched him narrowly," observes Dr. Hamilton, " as I apprehended a fever might be the consequence of his midnight ramble ; but here I was agreeably disappointed, for, in place of fever, his

relaxing plan : which usually failed in mitigating their severity, or shortening their duration. Accordingly, upon the next attack, instead of confining himself to his arm chair, in the chimney corner, increasing his clothing, and drinking water-gruel as usual, he betook himself to a room without a fire, threw open the window, and remained for some hours walking about, freely exposed to a February air. The consequence was an immediate and severe attack of pneumonia (inflammation of the lungs), which cost him his life.

I would not wish it to be understood, that the treatment I object to, as a general plan of cure, is uniformly pernicious. It catarrh was cured, his cough ceased, and never afterwards returned."

is not the nature of the remedy, but its abuse, that I deprecate. On the contrary, much attentive observation has convinced me, that, when employed with a due degree of circumspection, and with the limitations I shall presently prescribe, it forms the basis of the only mode of treatment that can be depended upon for the successful removal of the disease in its incipient state ; and experience of its good effects has enabled me confidently to recommend it in every case of *recent inflammatory* catarrh* (27).

The means to be employed in the cure of this complaint naturally fall under the

* None of the observations contained in the present essay apply to that species of catarrh incident to old people, usually called *chronic*, or *atonic catarrh*.

heads of—1, *Temperature*,—2, *Diet*,—and 3, *Medicine*.

I. Upon the accession of the symptoms indicating the commencement of the disease, the first thing to be attended to should be the due regulation of the temperature of the several agents applied to the body ; of these, the principal which demand attention are, the *atmosphere*, and the *fluids* received into the stomach.

The air which immediately surrounds the body, and which is inhaled in respiration, should be as cold as is consistent with comfortable feeling. Perhaps a temperature of from 40 to 50 degrees will be most salutary. An approximation to this may always be effected, in three seasons of the

the year out of the four, by the patient remaining, in cold weather, in a room warmed only by a small fire; and, in the milder months, by a free exposure to the open air, in the shade; in all cases carefully avoiding the causes which operate in rendering the cold air injurious: these are, principally, as has been before said, 1st, its being combined with moisture; 2d, its being applied in a stream or current; 3d, its being employed in too sedentary a state of body; and, 4th, its being carried to such a degree as to induce a state of chill. In the height of summer, at which time many people are equally liable to catarrh, as well as other diseases arising from variations of temperature, perhaps none of the means which have been suggested for reducing the warmth of

the surrounding air can be employed with perfect safety.

The covering of the body, both by day and during the night, should be as light as the external temperature will allow of, and every thing taken into the stomach should be perfectly cold.

By adopting these means upon the very first appearance of the complaint, its progress will very generally be arrested, and the "seven days' plague" will be reduced to an ephemera (28). It is of the utmost importance, however, to observe, that it is only in the early stage of catarrh that the good effects of cold are to be depended upon. The period at which this complaint terminates, as well as the symptoms which

attend it, is various. Sometimes the whole affection ceases in the course of a few hours*, at others it is prolonged to as

* Some people are liable to be suddenly affected with all the symptoms of a violent cold, which, in the course of an hour or two, will leave them as suddenly, and after a short interval (perhaps several times in the course of the day) again make their appearance, upon the accidental application of some imperceptible exciting cause. I once attended a young girl who, about two years before the period at which I saw her, was the subject of a very severe attack of catarrh, which left behind it so extraordinary a susceptibility to cold, that she afterwards became unable even to go from one room to another, or endure the least change of temperature, without having a most violent fit of sneezing, coughing, and other symptoms of incipient catarrh. These recurred so frequently, and were of so temporary a nature, always disappearing with the cause which

many days or weeks; sometimes again it is early attended with expectoration, at others it disappears without any having occurred; most usually, however, its duration is from two to four, five, or seven days; during the former part of which time, the permanent symptoms are dryness and huskiness of the parts, general indisposition, and more or less febrile heat; in the latter, a remission of these, and the occurrence of an expectoration of viscid mucus. In this case, the complaint may be divided into two stages: 1st, the period of inflammation, 2d, the period of expectoration: in the latter, or protracted stage of the complaint, where the cough and spitting alone remain,

produced them, as to justify the expression, that, after her first attack, she was seldom free from cold.

the effects of cold are usually as injurious as in the former they are salutary. In the one, the vessels of the part are in a state of increased action, which is reduced by every sedative; in the other, they are in a state of relaxation or debility; and the consequence of any unusual application of cold is very generally a suppression of their excretions, and a subsequent renewal of the inflammatory affection; which, in consequence of the debile state of the parts, usually assumes an *atonic* form, and runs out to a greater length of time than the preceding*. And in this way it is that colds are often kept up for months, until they degenerate into a permanently morbid state of the lungs. It is absolutely necessary, therefore, that

* Vide *Wilson on Febrile Diseases*, vol. III. p. 12 to 73.

the patient should be extremely careful in avoiding this source of danger, where his cough happens to be long protracted, by carefully guarding against all unnecessary exposure to cold, and by defending the feet and breast, as before advised; and, when obliged to go into an air of a low temperature, by increasing his clothing, and by holding a pocket-handkerchief, or some not very permeable substance, before his mouth and nose.

The use of cold, internally, will be further considered under the head of medicine.

II. *Diet.* A rigid attention to diet would be too severe a tax upon our comfort to be imposed at the occurrence of every slight attack of cold; but, whenever the disorder

rises to such a degree as to produce a state of general febrile indisposition, it will be absolutely necessary for the patient to pay a proper regard to regimen.

He should abstain from stimulating aliment of every kind, as also from wine and spiritous liquors; confining his diet to such things as are light and easy of digestion, as *sago*, *arrow root*, and other preparations of the various *farinacea*, with *milk*; *acescent vegetables*, and *cooling* fruits; light *puddings*, *custards*, *jellies*, &c., &c., &c.; and substituting for his usual drink either *toast and water*, small *cider*, the *acidulated soda water*, or some other cooling liquid. But where the symptoms are so trifling as not to render an abstinence from animal food requisite, those meats should be chosen

which are of the most digestible nature, as *veal* and *chicken*. Shell fish also are proper articles of food, as *oysters*, *cray-fish*, *lobsters*, *crabs*, and *prawns*; and, as drink, *wine* and *water*.

A common prejudice is entertained against *cheese*, *nuts*, &c., &c., in cases of catarrh, and this is founded upon experience of their increasing the cough: every thing which either stimulates the glottis and fauces in deglutition, or proves indigestible after being received into the stomach, invariably having this effect.

III. *Medicine*. Under the idea of there existing in, or being connected with, the animal frame, a principle, the efforts of

which are constantly excited to expel the various offending causes which occasionally disturb the harmony of its economy, the more observant physicians, from the earliest eras of medicine, have been led to mark, with care, the phenomena of disease, when left to run its natural course; and, in their plans of cure, have chiefly directed their attention to the regulating and promoting the salutary efforts of nature. Thus, in catarrh, the means which nature occasionally takes for its removal, or, in other words, the symptoms which mark its critical or spontaneous termination, are, principally, a copious and equable flow of sweat, an increased sécretion of mucus from the membrane of the trachea and bronchiæ, the production of a diarrhœa; and hence an indication for the use of diaphoretics, expectorants, and ca-

thartics, or laxatives*. Others, on the contrary, conscious that the operations of nature are but little understood, and often liable to fatal misinterpretation, have limited their practice solely to the administration of remedies, the virtues of which either their own

* The spontaneous solutions of all febrile diseases are commonly attended by some prominent and well-marked symptoms. Those which are observed to accompany the natural or critical terminations of *catarrh* are, the appearance of a general, moderately profuse, and equable perspiration upon the surface of the body, after the skin has been dry and constricted; the occurrence of a copious expectoration of viscid mucus; a diarrhœa, or defluction from the intestinal canal; the deposition of a furfunaceous (bran-like) sediment in the urine; the appearance of a scabby eruption about the nose and ears, and, occasionally, upon the head and other parts of the body. Vide *Velsch. Hecatost* 11. *obs.* 65.

experience or the experience of others is presumed to have sanctioned, without any regard to theory, or adverting to their mode of operating. In catarrh, the individual remedies recommended with one or other of these views (either upon general principles or specifically) are extremely numerous, and the majority of them certainly useless ; for, of the popular medicines advised for cold, I am led to believe, there are few that are not, either, on the one hand, inert, or, on the other, actually injurious.

The indications which arise in the treatment of this complaint, to be fulfilled by medicine, may be reduced to the following heads : *to reduce inflammatory action* in the early stage ; *to diminish irritation*

in the protracted stage; to *palliate urgent symptoms*.

The acute form of catarrh, which is here exclusively spoken of, like all other inflammatory diseases, requires the *anti-phlogistic* mode of treatment, but the attendant symptoms seldom amount to a degree of urgency to demand the more active forms of this regimen, without the disorder degenerating into a state approaching to actual *pneumonia* (inflammation of the lungs). Of the means to be pursued under these circumstances, it is not necessary here to speak, as, in every such case, domestic management should be instantly superseded by the advice of a regular practitioner in medicine: and here I strenuously advise, that proper assistance, when it can

be procured, should never be omitted when the complaint assumes its more severe forms*.

The occasional use of *aperients* is indispensable, and should be had recourse to early in the complaint. I am inclined to think, however, that very active *purging* is more often found prejudicial than serviceable, probably by diminishing expectoration,

* “If a cold come with any violence, apply the means here recommended for three or four days; if the patient does not get materially worse, or the complaint abate in that time, send for the best assistance in your power. If you are not able to send for a physician, let it be an apothecary, of a humane and tender disposition, and one who studies rather to remove the complaint than to load you with a number of phials.” *Hays on Colds.*

and transpiration by the skin. Of *laxatives*, the saline, or more cooling, are to be preferred*.

* Epsom salt (*magnesia vitriolata*).

Common Glauber's salt (*natron vitriolatum*).

Rochelle salt (*natron tartarisatum*).

Soluble tartar (*kali tartarisatum*).

The *dose* of each of these salts is from *half an ounce* to an *ounce*, according to the age of the patient. This, dissolved by a slow fire, in about two ounces of water, should be taken early in the morning, and, if necessary, repeated after an interval of two days. The saline aperients have the advantage over others in febrile complaints, in being sedative and cooling. Those, however, who have an aversion to *salts*, may substitute any other opening medicine to which they have been accustomed, as *castor oil*, *jalap*, *rhubarb*, *colocynth*, &c., &c. But the purgative which of all others is most powerfully febrifuge is *calomel* (29). The prejudices commonly entertained against the

But the remedy to which I wish more particularly to direct the attention of the

use of this remedy are now commonly understood to be founded in error, and that it may always be administered with perfect safety, provided the patient guard properly against imprudent exposures to wet and cold, at the time he is under its operation, and there is no *idiosyncrasy* of constitution that militates against its use. *Calomel* is best administered in the form of pills, as in the following recipe :

Take of calomel from three to eight grains ;

extract of colocynth four grains ;

conserve of honey a sufficient quantity to

form them into the consistence of pills. .

But some individuals possess such a peculiarity of temperament (*idiosyncrasy*) as to render them very remarkably and morbidly susceptible to the impressions of certain medicines applied to the stomach, and this though the quantity taken be so small as not, in others, to produce the least effect. This is

reader, for the fulfilling the first of the indications above-mentioned, and which, from the strongest conviction of its efficacy, I can venture confidently to recommend is, *frequent draughts of cold fluids, combined with nauseating doses of emetics* (30).

not unfrequently the case with regard to *calomel*, a single grain of which is sufficient, in some, to produce the most violent *ptyalism*. In such cases, its indiscreet use is liable to be followed by the most alarming consequences. I have often known this circumstance to occur with regard to *iphecacuanha*, and also in some instances to *rhubarb*; and a case was related to me, by a medical gentleman of my acquaintance, of a lady who was thrown into the most violent convulsions, by taking only ten drops of laudanum. The same native antipathy, or horror, is often found to exist in respect to certain impressions on the senses.

Of the external use of cold air, as far as relates to catarrh, I have already spoken under the head of temperature ; and I there objected to it as a remedy, which, when injudiciously employed, was liable to be followed by the worst consequences. My own experience, however, as well as that of others whose opinions I have collected, enables me to bear an opposite testimony with regard to the effects of cold administered internally in the form of frequent draughts of cold fluids. I have known symptoms of a catarrh, which threatened to be of the most severe nature, entirely removed by simply drinking three glasses of cold water at short intervals* (31).

* A glass of cold water, taken upon going to bed, is a very common, and also a very successful remedy for *catarrh*, among the lower order of people, in

The impression of cold upon the stomach, independently of its general refrigerant operation, seems to have the effect of promoting the action of all the secretory and excretory vessels. It increases transpiration by the vessels of the skin; it powerfully excites the mucous follicles of the air tubes to rid themselves of their contents; and it is, at the same time, gently diuretic and laxative*. There is no cold fluid, per-

many parts of England. In the western counties, I have often known it employed in conjunction with a practice that perhaps may contribute to its good effects, namely, the warming the bed with a pan of coals, into which a little coarse sugar had been previously sprinkled.

* A late writer strictly enjoins a very *limited use of liquids* in all complaints of the chest, under the idea that the copious introduction of fluids into the

haps that can be administered which is superior to pure cold water ; and the drinking of frequent draughts of this, combined

vessel tends to embarrass the pulmonary system, and thereby increase the existing irritation. This may, perhaps, hold good as far as relates to *tepid* diluents ; but I much doubt whether the copious use of *cold* liquids does not tend ultimately rather to diminish than increase the quantity of fluid in the circulating system : so speedy and considerable is often its evacuant effects. Thus much, however, I can confidently assert ; I have known a great number of very severe cases of cold cured by the plan of treatment above prescribed, in the course of a few hours, after having previously existed for some days under a limited use of liquids : that is, where the habit or inclination of the patient did not lead him to take more than *a pint and a half* (the quantity specified by this author) in the twenty-four hours. Vide *Davidson's Observations on the Pulmonary System*.

with nauseating doses of emetics, will be found a remedy as effectual as it is simple, in every case of inflammatory catarrh.

As a nauseating medicine, the *emetic tartar* (antimonium tartarisatum) is to be preferred; both on account of our being able with more certainty to regulate its dose, and as it more powerfully promotes expectoration and diaphoresis, without, at the same time, increasing arterial action: for it may be regarded as a general rule, in inflammatory diseases, of whatever description, that all attempts to excite evacuations by stimulant and heating medicines, will be uniformly injurious*.

* The medicines commonly employed for the purpose of exciting nausea, are *iphecacuanha*, and

'The annexed is a formula adapted to the adult age, which will, in general, produce

preparations of *antimony*. The former is objectionable on account of the facility with which it excites vomiting. Of the antimonial remedies, those most in use are, emetic tartar (*antimonium tartarizatum*) James' powder, and the antimonial powder (*pulvis antimonialis*); of these the emetic tartar is by far most equal in its operation.

Full vomiting, at the commencement of the complaint, will seldom fail to prevent its further progress; but the exciting this unpleasant operation by art, would, by most people, perhaps, be considered a remedy even worse than the disease (32); but those who have courage to take an emetic upon first feeling the symptoms which announce the approach of a severe catarrh, will uniformly find these removed; and the occurrence of those which would otherwise have supervened prevented by its operation. Vide further observations on the use of emetics, p. 184.

a very gentle *nausea*, without creating any considerable degree of uncomfortable sensation. In younger subjects, or under peculiarities of constitution, it must be proportionately more diluted* (33).

* Take of emetic tartar (*antimonium tartarizatum*) four grains;

pure cold water two pints:

Dissolve the emetic tartar in the water by trituration.—Of this solution from a quarter to half a pint may be taken every five or six hours.

In cases where, notwithstanding the use of the solution, the skin remains obstinately dry, and there is a general feverish disposition, either the following saline neutral draught, or *one* of the pills, may be added with advantage to each dose:

Take of fresh lemon-juice half an ounce by measure;

salt of tartar (*kali præparatum*) one scruple;

Thus administered, during the period in which a state of actual *inflammatory action* is going on in the mucous membrane, this remedy seldom fails to induce a speedy solution of the complaint; but wherever a cold, either in consequence of its severity,

laudanum (*tinctura opii*) ten drops:

Mix the salt of tartar with the lemon-juice, and upon the ceasing of the effervescence add the laudanum.

Take of calomel (*calomelas*) four grains ;

purified opium (*extractum opii*) three grains ;

or, of the extract of white poppies (*extractum papaveris albi*) six grains :

Beat these together until they become intimately mixed, and divide the mass into six pills. These, conjoined with the use of the emetic tartar, are singularly beneficial in all febrile affections.

or from its having been neglected in the first instance, runs out to a considerable length, it is usually kept up by a state of simple *irritation* of the part, which supervenes upon the disappearance of the *inflammation*, and becomes as it were habitual, exciting the vessels to an increased secretion of mucus, and producing cough by sympathy with the larynx. In this state, recourse should be had to the use of *digitalis** (fox-glove) (34), which will be found

* The *digitalis*, or *fox-glove*, is most commodiously and effectually administered in the form of tincture; but I beg leave to recommend to those who employ this remedy, to be careful in procuring it of an apothecary or druggist upon whom they can rely for the accuracy of its preparation, as, when prepared incautiously, the dose is liable to the greatest uncertainty. The dose of the *fox-glove*, in tinc-

in the highest degree beneficial, and its efficacy will be increased by the patient's
 ture, is from five to fifteen drops every six hours. It may be administered in any convenient vehicle, and its use should be persevered in till a sensible mitigation of the symptoms takes place, unless it should previously produce either a disposition to sickness, pain in the region of the stomach, giddiness and pain in the head, or a very considerable reduction of the frequency of the pulse ; in all which cases it should immediately be discontinued.

In this stage of catarrh, *opium* also may be administered with the best effects. Of still more considerable efficacy, however, I am inclined to believe, is the *extract of white poppies*. This remedy, however, is usually given in doses too small to produce any effect : administered in the dose of five grains, every three, four, or five hours, according to the age and constitution of the patient, it will be found a very useful medicine in all those tickling coughs that remain after the inflammatory stage of catarrh.

inhaling, at the same time, the vapour arising from *cicuta* (hemlock) and *æther*, in the manner prescribed below*. In protracted catarrhs, likewise, I have often known much benefit derived from wearing a warm adhesive plaster upon the chest†.

* In an inhaler, or common tea-pot, mix a spoonfull of *æther* with about half a drachm of the *extract of cicuta*, previously dissolved in a tea-cupful of boiling water; close the lid with care, and set the whole in a pan of warm water, when the vapour may be inhaled through the spout of the vessel containing the ingredients.

† Take of pure gum ammoniac (*gum ammoniacum*),
vinegar of squills (*acetum scillæ*),
each two drachms;
soft extract of opium (*opium purificatum*) a scruple:

First reduce the gum ammoniac into a fine powder,

This appears to be serviceable chiefly by defending the part from partial cold.

The more prominent symptoms of catarrh, and, in consequence, those which then add the other ingredients, and rub the whole together until it forms a thick consistent paste. This, spread upon leather, should be applied to the chest in its recent state, and suffered to remain on until it loosens spontaneously.

Dr. Buchan speaks in the highest terms of the use of a Burgundy pitch plaster worn upon the back. Why it should be applied to the back in preference to the front of the chest, I am at a loss to conceive (35).

The external use of various articles of the materia medica is occasionally resorted to with more or less advantage; camphor is said to have been used with the best effect. Vide *Lentin, Beobacht. Epidem. &c.*, p. 158.

are liable to be most urgent, are, *cough, gravedo* (or obtuse pain and weight in the fore part of the head), *oppression at the chest*, with *difficulty of breathing*, and *sore throat*.

The first of these is uniformly present, is often extremely urgent and severe, and is usually that to which the patient directs the chief part of his attention.

The medicines commonly employed for the purpose of alleviating cough are *demulcents* and *opiates*; of which a list is subjoined*; but the *syrup of white pop-*

- * Take of best purified honey,
- oil of sweet almonds, each two ounces ;
- fresh lemon juice one ounce ;
- syrup of white poppies half an ounce.

pies, in the dose of a moderate-sized tea-

Mix by triture to form a *linctus*.—*Dose*, a teaspoonful whenever the cough is most troublesome.

Take of oil of sweet almonds one ounce ;
 pure *rain* water half a pint ;
 salt of tartar five grains ;
 purified sugar half an ounce.

Dissolve the salt of tartar and the sugar in the water, and afterwards add the oil, when, by agitating the phial, an *emulsion* will be formed of cream-like appearance.

To this add paregoric elixir (*tinctura opii camphorata*) half an ounce.

In making this emulsion, it is necessary to employ soft water, otherwise the oil will not combine

spoonful, upon the first feeling of the tickling in the throat, is not only the

intimately with the other ingredients; but if this cannot readily be procured, the oil may be dissolved equally well by triturating it with the yolk of an egg, and afterwards gradually adding the water. When it is prepared in this way, the alkali may be omitted; its only use being that of a solvent.

It is here supposed that the patient is at the same time taking the *antimony*, as directed above; but where this is not the case, the addition of a grain and a half of *emetic tartar*, to the above, may be made with advantage. The following *emulsion* is somewhat similar:

Take of oil of sweet almonds one ounce; -

barley-water six ounces;

best white sugar,

most simple, but, I am inclined to believe, the most effectual.

pulverized gum arabic, each half an ounce ;

laudanum (*tinctura opii*) forty drops.

Incorporate the *sugar* and *gum arabic* together in a mortar, with a small quantity of the water, then gradually mix the oil, and afterwards add, by little at a time, the remaining portion of the water with the laudanum.

Spermaceti is often employed, under various forms, as a remedy for cough, as well on account of its demulcent quality, as from an idea of its promoting expectoration. Its expectorant quality, however, is extremely trifling, and as the liquid mixture made of it is very liable to turn sour, even in the course of a few hours, the preceding formulæ are to be preferred. When it is employed, the

The pain and heaviness in the head, which often occurs in this complaint to

form of a *linctus* is preferable to that of an emulsion. The following is a convenient *formula*:

Take of spermaceti (previously reduced to a fine powder, by being triturated with a little spirit of any kind) one ounce ;
 yolk of an egg, or mucilage of gum arabic (prepared by dissolving half an ounce of gum in an ounce of warm water), one ounce ;
 conserve of roses,
 syrup of white poppies, each half an ounce.

Rub the *spermaceti* with the *egg*, or *mucilage*, until they form a tenacious paste, then add the *conserve*, and, lastly, the *syrup* ; when the whole being incorporated will form a grateful *linctus*.

a distressing degree, may be generally much relieved by holding the head over

Spanish liquorice, lozenges of various kinds, *soft marmalades, currant and raspberry jellies, rob of elder, sugar candy, barley sugar, &c., &c.*, are remedies in universal use for the purpose of allaying the tickling which produces cough. The effect of all remedies of this kind is to smear over the glottis and fauces, and, by thus sheathing them, rendering them less sensible to the irritation. As they have the advantage of being innocent, and are usually found to afford a temporary relief, they may, in every case, be resorted to with advantage as palliatives; further than this they have no effect. *Troches*, prepared after the following recipe, are often found to have a wonderful efficacy in allaying tickling coughs, and promoting expectoration:

Take of purified opium, two scruples;

tincture of balsam of Tolu, (*tinctura*

the steam of hot water, impregnated

balsami Tolutani) two drachms, by measure ;

syrup, composed of one part water, and two parts purified sugar, four ounces ; refined Spanish liquorice, previously moistened with a little warm water so as to make it soft ;

gum arabic, in fine powder, each two ounces and a half ;

emetic tartar, eight grains :

Rub the *opium* and the *emetic tartar* with the tincture and the syrup until the former is perfectly dissolved, then add the liquorice, softened with warm water, and, whilst beating them together, gradually sprinkle in the gum arabic. Divide the mass into *troches*, each weighing ten grains, and exsiccate them gradually in the air.

with camphor*. Applying æther to the forehead by means of a feather is often resorted to with advantage; as is also the use of sternutatories† and siala-

Dr. Buchan strenuously recommends the use of the following infusion:

Take of liquorice one ounce;
 salt of tartar three drachms;
 boiling water two pints:

Infuse for one night, and to the strained liquor add an ounce and a half of syrup of white poppies.
Dose—A tea-cupful three or four times a day.

* Vide page 179, *et seq.*

† Common snuff proves *errhine* to those who are not snuff-takers; but for those who have accustomed themselves to this stimulus, a more powerful one

gogues* ; but when the pain is extremely severe, the patient will experience most relief from a blister applied to one or both temples.

In cases of catarrh, attended with considerable *pain and oppression of the chest*, it will be necessary to apply a blister to the pit of the stomach, and this should never be omitted when the breathing is much affected (36).

will be necessary, as the herb-snuff, or *pulvis asari compositus* of the pharmacopœias, which may be procured of the druggist.

* The best *sialagogue* is the pellitory-root (*radix pthyrethri*, pellitory of Spain). A piece of this should be held in the mouth, and chewed until it excites a copious flow of saliva.

An inflammation of the throat, producing soreness, tumefaction, and pain or difficulty in swallowing, is usually considered a distinct complaint, and denominated *quincy**; but as it often also occurs, in a less degree, in consequence of an extension of the affection of the nerves and trachea, in catarrh, I have mentioned it as an occasional symptom of this complaint, under the common term of *sore throat*. When it is present in a slight degree only, it may, generally, be readily removed by keeping small portions of nitre in the mouth, and swallowing them as they slowly dissolve†; as also by the frequent

* *Cynanche*. Cullen. *Synopsis Nosolog.* Cl. 1.
Ord. 2.

† Take of purified nitre two drachms;

refined sugar, reduced to a fine powder,
six drachms;

occasional use of emollient and detergent gargles*. The treatment of cases of a more severe nature does not fall within the province of domestic medicine.

pulverized gum tragacanth three
drachms:

Beat these together with a small portion of water, until they are intimately mixed and form a coherent mass, which may be divided into moderate-sized *troches*, or lozenges, to be dried by means of a gentle heat.

* Boil about half an ounce of raisins, or figs, in half a pint of new milk; and to the decoction, when cold, add a drachm of sal volatile (*spiritus ammonia compositus*): or,

Take of barley-water six ounces;

honey of roses (*mel rosæ*) one ounce;

lemon juice half an ounce.

Mix. A portion of either of these may be used as a gargle every three or four hours.

An unpleasant and not an unfrequent sequel of this complaint is, a partial or complete loss of voice, depending upon a state of the muscles subservient to speech, approaching to palsy. This is sometimes only of a very temporary nature; at others, it has been known to continue for several months after the disappearance of the other symptoms; and, in some instances, the speech, after having been thus lost, has suddenly returned for a minute, and, in the succeeding minute, has been again taken away. This symptom, although extremely distressing, should never excite alarm, as in no instance, I believe, has the loss of voice, produced in this way, been permanent (37). It is in general easily to be restored by the use of stimulating gargles, composed of mustard seeds

and horse-raddish*, or by frequently retaining, for some time, in the mouth a piece of *horse-raddish*, or *pellitory root*†, at the same time that the patient removes to a pure air, and, if in a state of debility, endeavours to invigorate his constitution by nutritious diet, and regular exercise. This symptom has been known to be instantly removed by means of *electricity*, and also by inspiring *oxygen*, or pure air.

- * Take of mustard seeds bruised,
- horse-raddish cut into small slices, each
- half an ounce;
- boiling water half a pint.

Steep the mustard and horse-raddish in the water in a covered vessel, for the space of an hour, then strain the infusion, and, when cold, add to it a drachm. of sal volatile, or hartshorn.

† *Radix pyrethri*.

A case once occurred to me, in which not only a loss of voice, but a partial palsy of the muscles of deglutition, producing an imperfection, and, at times, a total incapacity of swallowing, ensued upon the disappearance of a severe catarrh, attended with sore throat ; and which did not entirely go off for the space of a month. In this case, the patient was in the habit always, previous to an attempt to deglutition, to suffer a tea-spoonful of brandy to pass over the affected parts ; after which, she immediately became capable of swallowing with ease, but again lost the power of doing so, after the effect of the stimulus had worn off.

I have now laid down that plan of cure, which I earnestly advise to be adopted in the domestic management of

colds, and which I flatter myself will be found to merit the attention of those to whom this complaint may be a source of distress. Before I quit the subject, however, I will beg leave, as well for the general information of the reader, as for the purpose of correcting errors in judgment, to which those who are unacquainted with the principles of medicine cannot fail to be liable, to offer a few remarks on some of the principal popular remedies.

I. *Inhaling the vapour of hot water.*

This is a remedy which has been long in use in this complaint, and is strongly recommended by Boerhaave, Van Swieten, sir John Pringle, Cullen, &c., in all inflammatory complaints of the chest.

A book, however, has been written expressly on the advantage of this practice, by Mr. Mudge, of Plymouth, who invented a machine, called an inhaler, for the purpose of conveying steam more commodiously to the trachea and lungs. In this publication, he declares, that a tea-spoonful of paregoric elixir, taken at bed-time, in some warm liquid, and the use of the warm vapour arising from simple water, through this machine, will be sufficient to cure a catarrhus cough in a night's time*. It were happy, had the success attending its use answered the sanguine expectations of this author. It is certainly, however, a remedy of very considerable efficacy, when employed under

* Mudge on Catarrhus Cough.

certain circumstances of the disease, and may always be advantageously resorted to as an adjuvant, with due precaution, and an attention to the period of the complaint. Upon the first commencement of catarrh, and before the inflammatory affection of the trachea is completely formed, I have suspected, that it has often had the effect of rendering the subsequent symptoms more severe ; and this we may suppose, *a priori*, to be the case in a majority of instances, where it is used too early* : but at a more advanced period of the complaint, it tends powerfully to arrest its progress, by increasing the secretion from the glands and vessels of the part, and thereby diminishing their inflammatory action. The vapour

* Vide page 123, *et seq.*

has been found most efficacious when impregnated with a sedative, as *cicuta** (*hemlock*), or the white poppy (*papaver album*†). Vinegar, and Hoffman's anodyne liquor (*spiritus ætheris vitriolici compositus*), are also combined with it with advantage. A common funnel may be made to form a very good succedaneum for the inhaler, when this cannot be conveniently procured; the broad part being inverted over a vessel containing the water, and the steam being received by the mouth applied to the small end.

* Vide page 159.

† By means of boiling a few heads of the *white poppy* in the water, the steam of which is intended to be inspired.

II. *Steaming the head.* When the cold chiefly occupies the head, it has been recommended, by some people, to suffer the whole head, face, and neck to remain, for a considerable time, in contact with the steam of water, as hot as the patient can bear. This is advised to be done in the following way. While the patient sits up in bed, a pan containing two or three quarts of water may be placed immediately under and before his face, letting it rest on his lap, and a piece of flannel, not too thick, being put over the head, and extending under and around the pan; this will keep the steam in contact with the face, neck and head, and, at the same time, will admit sufficient air for respiration*. In cases of

* Hays on Coughs and Colds.

great stuffing up of the nose, and difficulty of breathing through the nostrils, I have known this practice have the effect of removing these symptoms in the course of a few hours; but it is seldom successful, where there is considerable pain and oppression at the fore-part of the head, in consequence of some inflammation occupying the cavities communicating with the nostrils. In this case, the symptoms are generally aggravated by the stimulus of the heat.

III. *Pediluvium* (38). Bathing the feet in luke-warm water, or bran and water, a little hotter than milk just taken from the cow, at the same time that something warm, as a glass of rum and water, sweetened with sugar, or water gruel, is taken internally,

forms a remedy upon which many people place their sole reliance for the removal of their colds. The *pediluvium* is a simple, and often found to be a powerful assistant to the operation of other remedies, by equalizing the circulation, and tending to promote sweat. In employing this practice, however, much caution is necessary not to get fresh cold; the feet should be carefully and speedily wiped dry, and afterwards wrapped up in a warm dry flannel, or the patient should immediately go into a warm bed.

IV. *Inspiration of artificial air.* The reports of those who are advocates for pneumatic medicine represent the use of different kinds of factitious or modified air, inspired by means of an appropriate ap-

paratus, as having been productive of the best effects in cases of catarrh. In obstinate cases of the complaint the use of these may be resorted to with a fair prospect of success*.

V. *Opium and paregoric elixir.* Paregoric elixir is a very common, and, by a very large class of people, considered a sovereign remedy for colds ; being supposed to possess some specific property. It also forms the basis of most of the cough drops vended by empirics. If a person who has not the means of obtaining better advice go to a chymist†, and enquire for the best

* Vide the writings of Dr. Beddoes, Dr. Thornton, Cavallo, and others.

† It is a common practice for druggists and chymists, as a means of retailing their medicines, to

remedy for a cold, he will be given (provided at least the person to whom he applies do not happen to be the vender of any quack medicine for this purpose) *paregoric elixir*. The properties of this medicine are diaphoretic, slightly expectorant, and anodyne ; it containing a grain of opium in about every thirty-six drops. It has recommendations from its simplicity, as well as from its efficacy ; for that it often has the best effect there can be no doubt : many people entirely depending upon it for the removal of their complaint, and are seldom disappointed in their expectations of its good effects. The form in which it is usually administered, is the value of a tea-spoonful

give advice in simple cases, gratis, to the lower order of people who apply to them.

about every six hours, and the last thing upon going to bed. Its efficacy may be increased by adding to each dose about ten drops of antimonial wine.

VI. *Emetics*. The operation of an emetic, besides its more immediate effect in evacuating the contents of the stomach, produces such a universal commotion in the system, as to excite every minute fibre into action; and in this way it is that emetics prove salutary in the majority of complaints in which they are administered. They excite a new and powerful action, which expels or overbalances the pre-existing weaker one. Thus they arrest the progress of fever, and thus, if administered at the accession of catarrh, they will prevent the occurrence of the symptoms which

would otherwise infallibly ensue. In three cases out of four, perhaps, if upon feeling a stuffing of the nose, dull pain in the head, sneezing, and other symptoms which mark the commencement of the complaint, a person has resolution to try the experiment, he will find a brisk emetic have the effect of completely restoring him to his natural feeling* ; but I have before observed, that this is a remedy so extremely unpleasant in its nature, that most people would rather put up with a cold than submit to its operation ; when the complaint, however, threatens to assume a very severe form, this plan of prevention may be resorted to with every prospect of success. Vomiting, from

* On the use of emetics in catarrh. Vide *Stoll Rat. Med.* p. 7.

whatever cause, will also prove beneficial, not only at the commencement, but at every period of the complaint. Subjoined are the most convenient forms of emetics*.

VII. *Dr. James' powder.* All slight febrile dispositions, not sufficiently urgent

* Take of powder of *iphecacuanha* from seven to fifteen grains, according to the age and strength of the patient;

emetic tartar one grain;

Mix them with a few table-spoonfuls either of water or white wine.

Take of *wine of iphecacuanha* from half an ounce to an ounce;

wine of antimony a drachm;

Mix them.

During the operation of an emetic, it is advisable to drink copiously of some warm diluent fluid, as chamomile tea, or warm water.

to call for medical advice (of which the principal is a severe cold), are usually treated by the administration of *James' powder*. This is a preparation of *antimony*, apparently in no respect differing from the *pulvis antimonialis* of the London Pharmacopœia than in being milder, and is perhaps the only patent medicine that can be regarded as really useful. In the way, however, in which it is usually made up by the venders*, it is liable to be administered in

* Principally Newberry, the proprietor, and Perin, of Southampton-street, who professes to have made the medicine for many years under the direction of the inventor. It is to be lamented that this medicine is sold at such an exorbitant price, each packet vended by Newberry being now charged half a crown, whereas its intrinsic value, exclusive of paper, &c., &c., cannot be more than one penny.

very unequal and uncertain doses ; a packet often containing some grains more or less than is specified* : a circumstance which may often be attended with inconvenience, and perhaps with unpleasant consequences to the patient. I would recommend it, therefore, to every one who places any reliance upon this remedy, to weigh accurately the number of grains they design to take, or, if economy is an object to them, to supply its place with the common antimonial powder, which is in every respect an equally good medicine. The dose of this is from three to eight grains, made up into the form of a pill, or taken in a little honey or jelly.

* Vide what is said on this subject by Mr. Davidson, in his *Observations on the Pulmonary System*.

VIII. *Patent medicines.* Of the various medicines advertised as *infallible* remedies for the cure of *coughs* and *colds*, the more noted are—Perrin's balsam of lungwort*, Allen's balsam of liquorice†, the balsam of

* Lungwort (*pulmonaria maculata*, *pulmonaria officinalis*, Linn.) was formerly much employed in pulmonary complaints, but has long since been regarded as perfectly inert, and is now deservedly fallen into disuse. With regard to this supposed preparation of it, it is much to be doubted whether a single grain of the plant is employed in the composition. The lungwort possesses no properties that can be deemed balsamic, and the mucilaginous part of the plant, in which its virtues are supposed to reside, cannot be imparted to the spiritous menstruum with which the medicine in question is made. Vide *Medical Observer*, No. I. p. 11.

† Apparently consisting of nothing more than a

honey*, Godbould's vegetable balsam†,

kind of paregoric elixir, impregnated with aniseeds.
Med. Observer, p. 3.

* Sold by Shaw, in St. Paul's Church-yard, and advertised as being invented by sir John Hill. "A preparation which every one, the least versed in chymistry, must know could not, by any chymical process whatever, be made from honey. In pharmacy, or chymistry, there is no such preparation known as *balsam of honey*, nor is the spirit with which this pretended balsam is made capable of extracting any of its medical properties." *Med. Observer*, p. 17.

† "On examining this nostrum we do not discover any property that can possibly entitle it to the appellation of a balsam; but the propriety of the term vegetable we cannot dispute, since *vinegar*, *sugar*, and *honey*, are vegetable productions. We can, however, positively deny, that it possesses the balsamic property of vegetables, and our examinations, as

*Lucas' pure drops of life**, *Madden's vegetable essence*†, *Solomon's cordial balm of*

well as the trials we have known to have been made with it, do not justify our attributing to it any virtues superior to the common *oxymel* of the shops, although sold at the very exorbitant rate of eighteen shillings per pint, for which a regular chymist would be ashamed to ask as many pence." *Med. Observer*, p. 33.

* The title of this medicine is so truly ridiculous, and the complaints for which it is recommended so opposite in their nature (coughs and colds, consumptions and cholera morbus), that it is extremely doubtful whether it possesses any property really useful, other than that of a simple carminative, which in complaints of the chest is often more likely to prove injurious than beneficial.

† "Mr. Madden declares, that no mineral or metallic substance enters into the composition of his

*Gilead**, the balsam of horehound†, the es-

nostrum, but that it is merely a vegetable essence. It resembles much the infusion of roses of the London Pharmacopœia, both in taste and appearance, and the dose for an adult being only sixty drops, we are inclined to doubt much the accuracy of the assertion; probably Mr. M. may not be aware that *oil of vitriol* is a mineral production! It is by no means deserving of the title of an essence of vegetables." Its having any efficacy whatever in the cure of coughs and colds may be reasonably suspected, if not positively denied. Vide *Med. Observer*, p. 50.

* This is one of the most celebrated medicines that has been offered to the world for many years past; so extensive indeed has been its sale, that the proprietor has already made a princely fortune. Among its other boasted properties, it has lately been much extolled as a remedy for coughs and colds.

sence of horehound†, the essence of coltsfoot†, various preparations of the balsam of Tolu.*

Its title is not sufficient to convince us, neither does examination discover that it is, in the slightest degree, impregnated with the true *balm of Gilead or Mecca*. The author has suspected it to contain a preparation of the *digitalis*; if this be really the case, the greatest degree of caution is required in its use.

† The sensible qualities of the *horehound* are, “a moderately aromatic smell and bitter taste.” The *coltsfoot* has “a rough, mucilaginous taste, but no remarkable smell.” How it is possible to make an essence from these indigenous plants, possessing their demulcent properties, is truly incomprehensible.

* *Balsam of Tolu* is a very grateful medicine, in consequence of its having a warm, sweetish taste

I here beg leave earnestly to recommend to every one who values the preservation of health, never to trust for the cure of any complaint, more especially an obstinate cough, to medicines of the description of those just mentioned ; or, in other words, to the *arcana* of charlatans. Most of them, they may be assured, are either perfectly inert, or really hurtful. By resorting to these, therefore, and persisting in their use, they are liable to let slip the favourable op-

and an extremely fragrant smell, somewhat resembling that of citrons. It is one of the reputed remedies for “ *coughs, colds, and consumptions.*” It requires, however, to be employed with some caution ; its properties are too stimulant to render its use advisable in recent coughs ; in protracted ones, and under a weakened state of the lungs, it may prove beneficial by being balsamic and corroborant.

portunity, when, by more rational means, their health might have been easily restored, and their complaint, thus gaining ground under the use of an ineffectual remedy, will often become inveterate in its nature, and set all human skill at defiance. Even supposing the medicine employed really possesses the virtues ascribed to it by the proprietor, it cannot be equally applicable to all the various forms and stages of the complaint for which it is recommended. If in one state of a disease, judiciously administered, it prove a successful remedy, in another it must of consequence be in the highest degree injurious.

When we reflect upon the extreme ignorance of the generality of our empirics, and look to the unblushing impudence

with which they usher into the world a collection of trash, the inefficacy of which it is in the power of every one, in the least acquainted with medicine, to detect, every reflecting mind must be conscious of the mischief that must occasionally result from the destructive traffic in which they are suffered to proceed with impunity.

It is the lower classes of society that are more especially liable to be taken in by the false assertions of these infamous venders of poison, and these almost uniformly prefer the use of a patent medicine to the advice of a regular practitioner. The author of these pages, from having had the care of the poor in a very populous district, has often had an opportunity of observing this

fatal prepossession, and has repeatedly seen the industrious peasant, the pride of Britain, fall a sacrifice to the delusion. It is only a short time since, that a poor and honest fellow, who had been universally respected in the parish where he resided, for his industry and the economy which enabled him to support a large family with credit, applied for advice, in an advanced stage of pulmonary consumption. Upon an inquiry into the history of his complaint, it appeared, that, by the strong recommendation of a neighbour, he had been induced to take a celebrated advertised medicine for coughs and colds, and had continued its use, under the firm persuasion of its infallibility, until the little money he had saved by industry was expended in purchasing it

at the enormous price at which it is sold by the quack ; his lungs became incurably diseased, for want of proper timely assistance, and in this state he was reduced to the necessity of applying to the parish for relief. Thus was a worthy and respectable family for ever deprived of their support, and society of a valuable member, by the barefaced protestations of an impudent empiric, who, totally ignorant of physic, and the administration of remedies, and actually unable to spell one word out of three, correctly, in his letters to his correspondents, from having been a JOURNEYMAN BAKER, became at once a self-dubbed doctor, and unblushingly offered to the world the product of perhaps a few insipid vegetables, for the cure of a complaint

which even the judicious hand of science is too often unable to cope with. Doubtless the lives of many are yearly sacrificed in the same way.

These fatal impositions are surely of sufficient importance to merit the attention of the legislature : the whole system of quackery cannot be too much reprobated by “ every medical man, every friend to humanity, and every advocate for the respectability of our national character ; inasmuch as it not only affects the lives of the ignorant and credulous, but must tend to injure our professional reputation, and render us contemptible abroad : for what opinion must the physicians on the continent form of us, on observing, in our public prints, and in the Ham-

burgh papers*, specifics advertised for the cure of consumption, cancer, stone, the venereal disease, without mercury, &c., when, from the very nature of those diseases, they must know that their different stages require different treatment? and what must the continental chymists say on seeing such preparations as balsam of liquorice, balsam of horehound, balsam of honey, a concentrated solution of charcoal, &c.†, which they must know to be fictitious names? and it is a

* “ Many of this class of medicines the author has observed to be advertised in the *Hamburgh Correspondence* and *American papers*. ”

† “ In *Russia*, to the great disgrace of our country, the importation of *English quack medicines* has been prohibited, notwithstanding they were sanctioned by a patent from this country : a convincing proof of the wisdom and policy of that government. ”

well known fact, that the characters of our chymists have so much suffered on the continent, in consequence of these dishonourable practices of empirics, that the medical men of France, Germany, Denmark, &c., suspect every preparation, or article in powder, coming from this country, to be adulterated. Thus the industrious and honest chymist is punished for the imposition of others*.”

IX. *Pectoral lozenges.* All lozenges are composed of powders made up with glutinous substances into little cakes, and afterwards dried, either in the air or by a slow fire. Those which are sold by chymists and patent medicine venders, under the title of cough lozenges, pectoral lozenges,

* *Medical Observer*, Number 1. p. 5.

&c., &c., consist of saccharine matter variously impregnated. Many of these, no doubt, are made the vehicles of some useful expectorating medicine ; but I can take upon me to assert, that the greater number of them possess no property whatever, but that of a simple mucilage, flavoured with some grateful aromatic, and, in consequence, that they operate only as common liquorice, or sugar-candy, by smearing over, and thereby rendering the parts they cover in their descent less sensible to irritation. The following is a receipt for lozenges, at least equal in flavour, and, in all probability, superior in point of efficacy, to any sold under a patent :

Take of refined sugar, in fine powder, three ounces ; of raspberry jam one ounce ;

of finely pulverized gum arabic one ounce ; of soft purified opium two scruples ; of emetic tartar four grains. Rub the opium and the emetic tartar with the raspberry jam, until they are intimately incorporated, and then add the other ingredients, either with or without a little warm water, as the paste happens to be more or less consistent. Form lozenges, each weighing about eight or ten grains, and dry them by means of a very gentle heat.

To those who make their own lozenges, the following general rules may, perhaps, prove useful :

“ 1. If the mass prove so glutinous as to stick to the fingers in making up, the hands may be anointed with any sweet or

aromatic oil, or else sprinkled with starch, or powder of liquorice, or flour.”

“ 2. In order thoroughly to dry the lozenges, put them on an inverted sieve, in a shady, airy place, and frequently turn them.”

“ 3. Lozenges are to be kept in glass vessels, or in earthen ones well glazed.”

X. *Indigenous simples.* A list of these, far too copious to enumerate, have long been in domestic use, for the cure of coughs and colds. Our native herbs, however, were formerly much more employed than they are at present; but their good qualities have been carefully handed down to posterity, and are still held in religious

veneration by many a good old lady, who prides herself upon her knowledge of the healing art. I will not take upon me to decide whether they really possess the efficacy ascribed to them. The virtues of those in common estimation, for the cure of colds, appear to reside exclusively in the glutinous or mucilaginous matter with which many of them abound, and the infusions made of these are, in the language of our house-wives, “*soft and healing.*”

Suffice it to observe, that those most frequently employed for this purpose are the *marsh mallow**, the *horehound*†, and the *coltsfoot*‡.

* *Althæa officinalis.* Lin.

† *Marrubium album, marrubium vulgare.* Lin.

‡ *Tussilago.* *Farfara bechiam.*

ANNOTATIONS,
EXPLANATORY AND PRACTICAL;
IN WHICH IS EXHIBITED
A NEW THEORY
ON THE ACTION OF MANY OF THE PREDISPOSING
AND EXCITING
CAUSES OF CATARRH;
WITH ORIGINAL AND APPROVED RECEIPTS FOR THE
CURE OF THAT DISORDER IN
THE UNITED STATES.

BY J. STUART, M. D., &c.

————— juvat integros accedere fonteis,
Atque haurire: juvatque novos decerpere flores:
Insignemque meo capiti petere inde coronam,
Unde prius nulli velârint tempora Musæ.
LUCRET. lib. I. v. 926.

NOTES, &c.

1. THE EXTENSIVE DOMINION OF CATARRH.

Page 3.

IT is much to be lamented, that the preceding paragraphs should contain truths of too general application to be confined to the island of Great Britain alone. They extend to every country and place on the globe, but to none are they more particularly applicable than to the climate of North America, and that of Philadelphia.

2. LOSS OF APPETITE.

Page 21.

The loss of appetite, in this climate, is by no means an inseparable attendant on catarrh; on the contrary, in many cases, the appetite remains totally unimpaired, and, in some, it is increased almost to voraciousness.

3. AIR OF MANUFACTORIES AMELIORATED.

Page 40.

This, probably, is to be attributed as much to the rarity of the air, in such places, not admitting the usual quantity of oxygen in a given volume, as to any other cause. Hence, might not this evil be remedied, or prevented, by increasing the relative proportion of this principle by art?

4. IRREGULARITY OF ANIMAL HEAT.

Page 51.

This may be accounted for, by supposing it to depend on an *occasional* increased compression of the cerebellum diminishing the susceptibility of the arterial system to stimuli. The same thing takes place in the comatous state of fever, when even that extremely delicate and sensible organ, the eye, may be touched with the finger, without evidencing the least sensibility or symptom of excitement.

5. INCREASED ACTION ACCOUNTED FOR.

Page 54.

This rather happens from the re-accumulation of susceptibility, by the abstraction of heat, which before acted with too much power for the system near a state of exhaustion.

6. THE ACTION OF HEAT.

Page 54.

This is a true state of exhaustion. Long-continued heat so far transcends the action of the ordinary stimuli of life, that the nervous system becomes insensible to these almost altogether, or, in the language of the day, excitability becomes exhausted.

7. OF THE ACTION OF COLD.

Page 55.

Upon the application of intense or long-continued cold to the extremities, *debility* in the extreme capillary arteries succeeds, and, consequent to this, a diminished circulation in the skin, which is followed by an imperfect *oxygenation* of the blood, which last, if the system be so balanced as to escape topical inflammation, always predisposes to, or actually induces sleep. The same takes place in ascending the Alps, and in many other places surrounded by rarefied air. Vide M. Saussure.

8. UNITY OF DISEASE.

Page 57.

Did the doctrine of the unity of disease require any thing more than a knowledge of nature and of the functions of the animal economy for its support, this observation should certainly set it far beyond the pale of controversy. In it are con-

tained truths, than the knowledge of which no principle in medicine is of more importance in the cure of disease ; and yet, until the day of our American Hippocrates, how strangely have they been neglected !

9. COMPARATIVE SCALE OF THE RELATIVE
STRENGTH OF THE LUNGS AND SKIN.

Page 58.

Hence it may be inferred, that some parts of the system are relatively stronger at some times than at others ; and hence also might be formed a comparative scale of the strength of the lungs with that of other parts, and more particularly with that of the superficies.

10. CAUTION.

Page 62.

In these observations is suggested the necessity of the greatest caution in approaching the fire, drinking stimulating liquors, the eating generous

and high-seasoned viands, lying under a great weight of bed-clothes, or in heated rooms; after long exposure to cold, a camp life, &c., &c.

11. OF DRINKING COLD FLUIDS.

Page 64.

So many melancholy occurrences of this nature have happened in the different towns and cities of the United States, and more particularly such great numbers in the city of Philadelphia, that no opportunity of precautioning the inhabitants against an indulgence in drinking cold water, when warm, should ever be neglected. The pernicious consequences incident to this act of imprudence may be always avoided by waiting for the body to cool before drinking; or by frequently rinsing the mouth, and washing the hands and face with some of the cold fluid, before any is swallowed; or, finally, by taking a very small portion at a time, until the appetite for it is somewhat allayed.

12. HYSTERIA AND ATONIC GOUT.

Page 95.

The ladies, in this and many other cold climates, are observed to be much subject to dyspepsia, hysteria, colic, and various other diseases termed nervous. These in most cases, it is presumed, may very justly be considered only so many forms of atonic gout, passing by the extremities, to use the words of a celebrated physician of this city, and arising from deficient excitement, by want of attention to clothing these parts sufficiently warm.

13. OF FLANNELS WORN NEXT THE SKIN.

Page 96.

Better authority could not be adduced for the salutary effects of wearing flannels *next the skin*. But when warm rooms, a large quantity of bed-clothing, warming of beds, and even clothing the body unusually warm, are considered predisposing causes to catarrh, and wearing flannels *next the skin* a preventive of the same disease, our

author certainly speaks in paradoxes. For if it be true, and, it is presumed, none will be hardy enough to deny, that the causes mentioned as noxious must produce their hurtful effects by so preventing the escape of heat, generated in the body as to accumulate an artificial atmosphere too warm for the preservation of the functions of the body in a state of health and regularity, and that the good effects of flannel are to be attributed to its non-conducting powers alone, the unqualified use of this last cannot be admitted without eminent danger of inducing a disposition to CATARRH or COLD. However novel the doctrine, and however repugnant to the generally received opinion of physicians it may be, the editor is fully convinced, both from observation and experience, that the persons most indifferent to the use of flannels *next the skin* are those only who could wear them with impunity, if not with advantage. These are the robust, and such as are addicted to much and laborious exercise. In these the mobility of the system is less, any occasional excess of action is not propagated from ~~one~~ part to another with the same facility, and, of consequence, the circulation is more uniform and regular.

On the other hand, in *weakly habits*, where there is seldom a well-balanced circulation for twenty-four hours in succession, the heat of the artificial atmosphere and that continual *friction* on the skin arising from the non-conducting properties and the elasticity of the flannel, cannot but induce and keep up constant sensation, if not generate an occasional inflammatory diathesis, in that extensive and sympathizing organ. The mobility of these last subjects is such, that action is propagated with the greatest facility from one part to another the most remote ; hence a predisposition to catarrh, when present, is increased, or even generated, where no such existed before ; and nothing remains to produce the disease but the application of an exciting cause, which is always ready in the vicissitudes of temperature so frequent and sudden in the climates of North America. To this may be added, that, after a long exposure to cold air, the temperature of the skin and of the clothing must always be reduced, while the excitability of the Schneiderian membrane must be greatly increased, or, in other words, it must be rendered much more susceptible to the action of heat or any other stimulus. On entering a warm

room, under these circumstances, some time is required, by reason of the non-conducting powers of the flannels in contact with the skin, before the temperature of the room can reach the external surface of the body, while every inspiration, in the heated air, brings a most powerful and active stimulus immediately to the parts already debilitated by the coolness of the atmosphere without, and, by an accumulated excitability, in high preparation for reflecting the action of stimuli.

14. ABSORPTION OF PERSPIRATION.

Page 97.

For the establishment of this doctrine, it seems necessary to prove that *absorption* of the perspiration is efficacious in preventing catarrh, otherwise this reasoning must be considered merely *vox et preterea nihil*.

15. OF THE ACTION OF FLANNELS WORN NEXT
THE SKIN.*Page 97.*

If flannels worn next the skin absorb perspiration, and evaporation strongly promote the dissipation of heat, how is it possible they should contribute to keep the system warm in winter and cool it in summer?

16. OF FLANNELS WORN NEXT THE SKIN.

Page 102.

Upon these principles it will appear, no clothing, of any kind whatever, should be employed in such quantity as to produce sensation. When this is the case, it is a certain proof of its being too heavy. Clothing of every description should always be as much as possible accommodated to the state and vicissitudes of the climate in which we live; but, on any sudden transition from a lower to a higher temperature, upon the principles here advanced, it is plain, warmer clothing ought

never to be exchanged for that which is much lighter. For it may be received as a general principle, that the exposure of the body, or of any part of it, to a colder temperature, is always succeeded by an increased sensibility or susceptibility to the action of a warmer temperature. Hence, as the inner surface of the lungs and the pituitary membrane, in its whole extent, are always immediately exposed to the action of the surrounding atmosphere, a diminution of clothing, by diminishing the circulation on the extremities, must necessarily be followed by an increased determination to these parts, and consequently CATARRH or COLD.

17. PRECAUTION.

Page 102.

To these precautions may be added those against an indulgence in animal food and high-seasoned viands, as they all produce the same effects, and are equally dangerous after exposure to cold.

18. OF THE DECOMPOSITION OF WATER BY
ANIMALS.*Page 105.*

That vegetables have the power of decomposing water, and appropriating the constituent parts most congenial, to their nature and nourishment, is now incontrovertible, and that animals are endowed with the same or similar powers, the editor believes is not less certain. The great proportion of oxygen in the composition of water, and the extensive use of this among animals of every description, strongly intimates that this is the principle in water exclusively appropriated by them. The editor has suggested an opinion, if not proved, that oxygen is *directly* sedative, in consequence of its power to unite with the blood, and thereby to remove the foreign nature of that fluid. The use of water by all animals, the circumstances under which it is most required, and its effects under these circumstances, all tend to the confirmation of this doctrine.

All animals seek this fluid after full meals, and with the more avidity as these are composed of food more than ordinarily stimulating. They seek it when under the influence of exercise; in ardent and inflammatory fevers; and, finally, under all impressions from the influence of excessive stimuli (which are generally composed of highly attenuated carbon); and it always affords relief, or, at least, it proves a temporary remedy to the unpleasant sensations occasioned by these causes. Now, if oxygen were a *direct* stimulus, how should a fluid containing eleven parts of fourteen of this gas, and decomposable by the system, produce such strikingly *sedative* effects?

19. OF THE ACTION OF OXYGEN.—A NEW THEORY.

Page 105.

This doctrine, with respect to the *modus operandi* of oxygen, however generally received, is by no means the more correct. That oxygen is not *directly* stimulating I infer, 1st, Because, although a person long exposed to a contaminated

atmosphere, in which an insufficiency of this vivifying principle is contained, grows pale, although his system languish, although he is affected with a constant inappetancy to motion, yet is he labouring under an *irritative* febricula. 2ndly, That this is not from any deficiency of stimulus, but from an excess, I infer, because, in these cases, blood drawn exhibits an inflammatory crust, while a discharge, in this way, is always followed by temporary relief. This excess, I conceive, is to be attributed to an imperfect state of that fluid, when deficient in one of its elementary or constituent parts, oxygen gas. In consequence of this, it may be said, emphatically enough, to be only semi-animalized, and thereby itself to become a foreign fluid, and an inordinate stimulus to the arteries, which keeps up that constant irritation wherein the fever consists. 3dly, A removal to a more salubrious atmosphere, unless the patient is too much exhausted, is generally followed by a return of health; while the use of stimulating medicines is always succeeded by injurious effects. Who, then, in his senses, could, for a moment, suppose a cure like this effected by any *directly* stimulating effects of oxygen, when bark,

wine, and other stimuli are employed with no better success than that of producing œdematous legs, obstructed viscera, and general dropsy? The fact is, oxygen, by uniting with the unassimilated parts of the blood, only changes its qualities from those of an unnatural fluid, to those more congenial to the arteries, and, thereby, gives the system respite from that constant irritation which excited and supported the disease. And, hence, the increase of excitement succeeding the use of oxygen, only results from the application of the ordinary stimuli of life, while oxygen does no more than to predispose the system for their influence, by removing the unhealthy stimulus of imperfect blood.

These observations are most clearly elucidated by the following facts. The editor having observed that many died of confluent small-pox, as late as the seventeenth, and even the twentieth day, and after all idiopathic symptoms of the disease had ceased; that they generally laboured under great oppilation and oppression at the breast; and that the blood taken in such cases was invariably sizy, suspected the cause of death

to exist in a failure of the skin to absorb a due supply of oxygen gas, in consequence of the ravages committed on this organ, by the disease. Upon these principles, he determined on supplying this defect, first indirectly by diminishing the quantity of fluids, and, afterwards, directly, by supplying the gas required immediately to the lungs. The difficulty of breathing, which before had been palliated by blood-letting, was much increased by the first few inspirations, but shortly after ceased altogether, while the pulse grew much softer and more open. The same dose was again repeated with exactly the same success, until the twenty-first day, when, finding the means employed, however flattering the success at first, were only calculated to prolong the life of the patient, without affecting a radical cure of his sufferings, the further use of the remedy was declined, which was followed by the death of the patient, on the twenty-first from the attack.

Nor does the theory here advanced rest upon this case alone; the same experiments have been since repeated with the same success, not only in this, but in other diseases wherein the sys-

tem was supposed to suffer from a privation of the same principle.

No remedy was ever applied with more strongly marked success than this, in what was taken for angina pectoris. Bleeding, in this case, had been used with only *temporary* respite, while anti-phlogistics, blisters, and the whole catalogue of anti-spasmodics had all been employed without the least advantage. Finally, upon these principles, with the concurrence of the other physician in attendance (Dr. Rush), oxygen gas was resorted to. On the first few inspirations, the cough, dyspnœa, and anxiety were evidently increased. The chagrin and disappointment occasioned by this were, however, of such short duration, that it would seem they were sent as a foil to heighten the exhilarating sensations which were immediately to succeed. The countenance, from the depths of gloom and despondence, soon became tranquil and serene, the respiration became free and easy, while the pulse, which was before chorded and tense, soon became open and soft, and the unfortunate sufferer, in full enjoyment of long-sought

ease, and flushed with hopes of permanent relief, exclaimed, with enthusiasm, "he plainly felt the gas pervade his very toes." It is worthy of remark, that, although the blood taken before the use of this remedy evidenced, in every instance, an uncommonly sizzly appearance, a small portion taken afterwards did not exhibit the least phenomenon of inflammation.

20. CATARRH BY CHANGE OF ATMOSPHERE.

Page 107.

The effects of a pure atmosphere, on those accustomed to breathe one more contaminated, can be accounted for, on the principles advanced in this work, in the most satisfactory manner. The blood of those residing in large cities, abounding with the principle of carbon, has a much greater affinity to oxygen than that of more perfect elaboration. Hence, upon exposure to a purer atmosphere, in the country, the first effects must be an accumulation and detention of blood in the Schneiderian membrane, from that attraction before noticed between the superabounding carbo-

nic principle in the blood and the increased proportion of oxygen in the air entering the nares, fauces, and lungs. This is succeeded by a local plethora, in this membrane in particular, while a rapid oxygenation of the general mass of blood must so increase the volume of fluids, as to induce the same state of the whole system, all which must necessarily increase a predisposition, or even produce one which before did not exist, to CATARRH.

Hence also may be explained the good effects of the advice of our author. The blood of the children mentioned by him, supersaturated with the carbonic principle, on exposure to an atmosphere, on the suburbs, containing but a slightly increased proportion of oxygen compared to that of the city, became so slowly oxygenated, that an increased determination and accumulation of blood in the Schneiderian membrane, and consequently catarrh, did not take place.

The practical inference from this theory is, that all persons leaving large cities for the country, will generally be much more exempt from

catarrh, and every other inflammatory disease, by losing a little blood before their departure.

21. ACTION OF MUSK AND OF THE FUMES OF
THE MURIATIC ACID ACCOUNTED FOR.

Page 111.

In the note of the author on this page is contained the strongest confirmation of the truth of the principles advanced by the editor, on the operation of oxygen gas. He is acquainted with a gentleman who is invariably affected with a coryza (or catarrh), by the effluvia of musk. These two agents operate in a manner very different from each other. The action of the fumes of the oxygenated muriatic acid is compound. It produces its effects, partly by a directly stimulating property applied immediately to the vessels of the Schneiderian membrane, and partly by the oxygen in its composition, as explained in Note 20. Musk, on the other hand, operates *directly* by its stimulating powers applied immediately to the sensible fibre.

22. OF MOISTURE.

Page 113.

Moisture, agreeable to the theory here advanced, operates by absorbing and carrying off from the surface of the body the principle of caloric. By this means the extreme vessels, losing the stimulus of heat, become inactive, the circulation languishes, and the blood, in the skin, not approaching the atmosphere at a proper distance, oxygenation fails. From the internal situation of the pituitary membrane in general, it must constantly preserve a higher temperature than the superficies, and the momentum of the circulation will continue the same, while, in consequence of the increased attraction of the blood now hypercarbonated, to the oxygen in the atmosphere, a plethora in this membrane will take place, and that increased action will follow, which constitutes CATARRH OR COLD.

23. DECOMPOSITION OF SEA SALT.—A NEW
THEORY.

Pages 116 and 117.

That part of the salutary powers of sea salt, in counteracting the noxious effects of moisture, depend upon a diversion to the skin produced by the directly stimulating properties of that substance, cannot be doubted. But, as these effects are not so evident from the application of alcohol, or any other substance more stimulating, it is probable that the sea salt, by being applied *particulatim* to the mouths of the æroinhalants (for it is presumed there are such vessels), suffers decomposition, from whence heat is evolved, which adds directly to its stimulating powers ; while the oxygen absorbed, uniting with the abundant carbon in the blood, takes off from its stimulating properties, and thus, diminishing its attraction to the oxygen in the atmosphere, prevents that retardation of blood and consequent engorgement and inflammation in the pituitary membrane, in which consists the proximate cause of CATARRH OF COLD.

It was upon these principles I introduced, in the yellow fever of the ever-memorable year of 1798, a strong solution of sea salt in heated brandy, as an embrocation, to recal the languishing circulation to the skin, with the greatest advantage. For it seldom failed, even where that alarming retreat of fever, generally the harbinger of dissolution, had commenced, to produce a return of heat to the skin, when sinapisms, blisters, and other the most stimulating remedies had been tried in vain. The illustrious Priestley showed that oxygen was absorbed by the blood through the dense membranes of a bladder. The red colour of hams cured with saltpetre (*kali nitrat.*) proves that the muscular fibre has really the power of disengaging it from the compound of this salt. Why, then, under circumstances much more favourable, those of a constant and uniform degree of heat, assisted by the almost inscrutable functions of vitality, should not the blood, in the smaller order of cutaneous vessels, be equal to the decomposition of this principle from sea salt? Reason approves the theory, and facts render it incontrovertible.

24. THE OPERATION OF COLD.

Page 122.

Much has lately been said concerning the operation of cold, or cool air, and the old question again agitated, "whether it is a direct stimulus, or a sedative;" and, however firmly the sedative operation is supported by its effects, some have lately gone so far, to support a contrary hypothesis, as to interdict the exposure of their patients to its salutary influence, even in the eruptive fever of small-pox. The strongest arguments of these theorists is deduced from their definition of a stimulus. "Any power is a stimulus (say they) which produces *sensation, motion, or thought.*" Then, I would reply, is bleeding a stimulus? By it is produced the *sensations* peculiar to syncope; by it is produced the *motion* of falling and *convulsion*; and, finally, by it, in the timorous and weak, are produced *thoughts* or apprehensions of dying. But of this enough. When we reflect on the salutary effects of cool air in inflammatory fevers, and its certain and almost immediate influence in checking, and even annihilating

the eruptive fever of small-pox, to argue against its stimulating powers, would be to abandon every principle in medicine.

25. RATIONALIA OF THE TWO PLANS OF TREATMENT.

Page 124.

However contradictory these two plans of cure at first view may appear, nothing can be more certain, than that they both occasionally succeed. But in order to determine on the most safe, and consequently the most advisable plan of the two, the RATIONALIA of each should be taken into consideration. That which admits of warm drinks, warm rooms, and warm air, when it operates in a manner the least dangerous, produces, by excessive excitement, such a relaxation of the exhalants of the bronchiæ as to admit of a secretion of mucus, or pus, which, though it relieve the topical inflammation by what is called expectoration, either lays the foundation for chronic catarrh, or absolutely terminates in an incurable phthisis pulmonalis. Now, it is plain that, should these exhal-

ants not admit of an increased dilation of their areas, before the cellular texture interposed between the air-cells and blood-vessels of the lungs should give way, this treatment must give rise to inflammation, effusion, and, perhaps, a fatal peripneumonia, or, from the same causes, may succeed an inflammation of the pulmonary and costal pleura and its consequences. These form only a few evils in the catalogue which may justly be apprehended from the warm plan of treatment; but, few as they are, they must, it is presumed, be amply sufficient to form the most striking contrast to that which prescribes cool air and the antiphlogistic regimen. By the application of cool air immediately to the parts affected, the powerful stimulus of heat is abstracted, the activity of the whole arterial system is diminished, the *vis a tergo* is removed from the inflamed vessels, these are relieved from that redundancy of blood and increased action in which the disease consists, and finally recover their wonted healthy tone without any morbid relaxation of their extremities, while the issue is brought about in the most approved manner the art aspires to—*cito, tuto, ac jucunde* (i. e., quickly, safely, and agreeably).

26. OF EXTERNAL COLD.—THE THEORY.

Page 125.

No truth in medicine is more firmly established than this assertion of our author, that the *free* and *extensive* use of external cold is inadmissible in catarrh, however salutary in other febrile complaints of too much action. The rationalia of this are not less evident. Although cold air should reduce the inflammatory action of the parts affected by coming immediately in contact with them, yet, as the action of the general system does not subside in an equal ratio with that of the topical affection, the vessels of this last must still remain in that state of accumulated excitability, with respect to the general system, which renders them subject to re-assume their former diseased action, as soon as the sedative power of cold shall be removed.

27. THE EFFECTS OF COLD EXPLAINED.

Page 132.

In the application of cold to the external surface of the body in catarrh, three things are always to be taken into consideration : 1st, The stage of the disease ; for it can be applied with success only in the inflammatory or first stage of catarrh. 2d, The mobility of the system. When cold is applied to the extremities, the mobility of the system, or that aptitude to propagate impressions from one part to another, should always be in a state to compensate for the temporary centripetal force given to the fluids by the diminished action of the cutaneous vessels, consequent to the first impression of cold on the surface of the body. 3d, and last, Plethora should always be removed before the application of this part of the treatment. It is probable it was from a difference of circumstances in the unfortunate case just detailed by our author, and the case of Dr. Hamilton's boy, with respect to these particulars, that exposure to cool air was attended with such various and different success. The editor once knew a gentle-

man, and has heard of several similar occurrences, cured of the most violent inflammatory catarrh by wading up to his knees two or three hundred yards in the cold month of November. In this case, he supposes, the plethora of the system was inconsiderable, while the abstraction of general excitement, through the application of cold to the skin, more than compensated for the centripetal force consequent to the temporary debility induced on that organ.

28. OF BLOOD-LETTING IN CATARRH.

Page 135.

Scarcely any thing respecting this disease is better calculated to prove the mildness of catarrh in England, when compared with that disorder in the United States, than the omission of a practitioner judicious as our author to mention phlebotomy as a remedy. In this country it is almost indispensable, insomuch that, in all cases of any violence, the loss of ten or twelve ounces of blood should be the first means employed.

29. OF THE USE OF CALOMEL.

Page 147.

The operation of calomel in the cure of catarrh is threefold: 1, It reduces action in the general system, by its effects on the alimentary canal, simply as a purgative. For this purpose, as its action is slow, it should always be assisted by some other more brisk cathartic, as jalap or rhubarb. 2, By producing a determination to the liver, and thus, by an increased secretion from that organ, securing more vital parts, and relieving those affected with catarrh. 3, By exciting a new and general action in the arterial system, which shall transcend or supersede the existing morbid action.

30. OF THE NAUSEATING PLAN.

Page 149.

That nauseating doses of tartar emetic have a considerable effect in reducing inflammatory action, cannot be denied. But whatever respect and deference be due to our author as a judicious

practitioner, I cannot but observe there are other remedies equally quick and safe, and much more efficacious and pleasant, in the cure of catarrh. Nor should I acquit myself of that duty which the public have a right to expect, were I to pass over so strong a recommendation of this CRUEL PRACTICE in silence. It is a noisome branch, sprung from that theory which supposed fever to depend on spasm for its proximate cause. The supporting stalk is now withered, nay, almost decayed ; it is time, then, this one of its most poisonous shoots should be eradicated ; nor may it ever grow in so fair a garden as American practice presents. In this case, fifteen grains of nitre (*kali nitrat.*) every hour, in some convenient fluid, will be much more agreeable and equally efficacious.

31. OF COLD DRINKS.

Page 150.

This is a fact which clearly illustrates the reasoning in Note to p. 132, ON THE ACTION OF COLD TO THE EXTREMITIES. The consent of the sto-

much with every part of the animal system is so generally acknowledged, that this organ is now admitted to be the medium through which almost all medicines, taken internally, produce their effects upon every part of the frame. Hence, cold applied to this viscus must be attended with more speedy and certain effects than to any other part whatever. Its operation in this case is simple : it produces its effects merely by the abstraction of the stimulus of heat.

32. OF FULL VOMITING.

Page 154.

The editor fully concurs with the author in the advantages of full vomiting in the commencement of catarrh ; as, under proper management, it seldom fails to terminate the disease in a few hours. But, so far from supposing “ most people would consider the remedy worse than the disease,” he conceives there are very few who would not prefer full vomiting, for half an hour, or even for an hour, to a *distressing nausea*, constantly kept up for two or three days in succession.

33. NAUSEATING PLAN REPUDIATED.

Page 155.

As the CRUEL PRACTICE of nauseating the stomach for the cure of any disease may be justly repudiated, the use of gentle saline purgatives, instead of the formula of the author, is here recommended, as much more agreeable and equally efficacious. For this purpose,

Take of Glauber's salt (*natron vitriolat.*) one ounce ;
 fresh lemon juice one ounce ;
 boiling water half a pint ;
 loaf sugar two ounces :

Mix and dissolve : when cold, add sweet spirits of nitre two drachms. Mix for use.

An adult should take two table-spoonfuls every hour, until the bowels have been well opened. Afterwards, as an alterative,

Take of nitre (*kali nitrat.*) half an ounce ;
 simple water half a pint ;

lemon juice half an ounce ;

sweet spirit of nitre half an ounce. .

Mix and dissolve. One table-spoonful to be taken every hour.

34. OF THE DIGITALIS AND THE NITRIC LAC.

Page 157.

It is much to be regretted that the digitalis should not have been so successful in the hands of the editor as to authorize his commendation of its virtues in the cure of pulmonary complaints. On the contrary, he conceives it may be justly considered as a substance which gradually undermines the powers of life ; that it ought seldom to be used in any stage of catarrh, and never without the advice of a skilful and prudent practitioner. In such cases as this described by the author, and even in many cases of phthisis pulmonalis, the editor, for several years past, has used what has been called by him the *nitric lac ammoniac*, with the greatest success. It is prepared in the following manner :

Infuse two drachms of *pure* nitric acid in pure water, eight ounces (half a pint), gradually pour the compound on of best gum ammoniac (*ferula Africana*), two scruples and a half.

Triturate them in a glass or composition mortar, until the whole of the gum is dissolved, and a homogeneous milky fluid is formed. The dose is one table-spoonful in six table-spoonfuls of sweetened water, or of any other convenient vehicle to dilute it, every three or four hours.

35. RATIONALIA OF THE APPLICATION OF BLISTERS TO THE BACK.

Page 160.

However it may have escaped our author, this preference is founded on the best grounds possible. The lungs are not only contiguous, but they are, in a measure, continuous to the back; they are connected to it by cellular substance and by the divaricating pleura, and supported by the immediate continuation of membrane in the coats

of the larger vessels which lie on the vertebræ of the thorax, or chest.

36. OF BLOOD-LETTING.

Page 169.

In this climate at least, a remedy should always be premised, which has never once been mentioned by the author, in the whole course of this essay; that is, bleeding. It is a certain fact, established as well by experience as supported by reason, that very few cases of acute inflammatory disease occur in this climate, in which blood-letting should not precede the application of epispastics (blisters). It is also necessary to observe, that blisters seldom produce so good an effect, until the inflammatory action of the system has been pretty well subdued, nor even then earlier than the evening of the third, sixth, or eighth day from the attack. In this case described by the author, the editor would recommend a prudent use of the lancet, and the antiphlogistic plan, as recommended in another part of this work, until inflammatory action is sufficiently reduced, and

then, on the next succeeding of the days before mentioned, the blister may generally be applied with the desired effect.

37. OF SENEKA SNAKE-ROOT.

Page 172.

In these cases the editor would recommend the use of a decoction of the seneka snake-root (*polygala seneka*), as a remedy the most efficacious of any other he has ever seen employed. The following is the formula in which he has generally used it:

Take of the sliced root of seneka snake-root two drachms; infuse it into eight ounces (*i. e.*, half a pint) of boiling water; stew it ten minutes; clear off the fluid, and add two ounces of honey.

Let an adult take one table-spoonful every two hours, and gargle the throat frequently therewith.

38. OF PEDILUVIUM.

Page 180.

Pediluvium, upon the principles before laid down by the editor, it is plain, must be used with caution, or only before the disease is perfectly formed, or after the inflammatory action has been in some measure reduced by blood-letting or purging. Hence it can be useful only as an auxiliary, after bleeding or purging. The glass of rum and water, to say the least, is certainly a hazardous medicine, and certainly ought never to be admitted as a part of the cure; on the contrary, the free use of cold water, in this case, forms a safer and a much more efficacious remedy.

39. OF OPIATES.

Page 182.

Opium, nor *paregoric elixir*, should never be administered in the first stage of catarrh. It is only in cases of long continuance, where inflam-

matory action has totally ceased, and in which the disease is kept up entirely by irritation, arising from an increased secretion of mucus, occasioned by debility in the exhalants, that opiates of any kind can be used with safety, or advantage. In such cases the following recipe is recommended with the greatest confidence:

Take of paregoric elixir one ounce ;
powdered gum arabic one ounce ;
simple water two ounces ;
sweet spirits of nitre two drachms ;
antimonial wine one drachm.

Mix and dissolve. One table-spoonful to be taken whenever the cough is troublesome.

FINIS.





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